
GENERAL REPORT AND ANALYSIS

CHAPTER I.

INTRODUCTION AND GENERAL EXPLANATIONS.

METHOD OF PRESENTATION.

The statistics of the census of manufactures are contained in three volumes. The present volume contains a general presentation and analysis of the statistics, while Volume IX consists of special reports, one for each of the individual states, and Volume X contains similar special reports dealing with some of the more important individual industries. The greater part of the statistics contained in Volumes IX and X appear in another form in the present volume. In the present volume, however, quantities and values of specific materials and products are not shown, except in Chapter XV, where they are shown for some of the leading industries. Data regarding the different classes of materials and products in the several industries appear in Volume X, and similar data for important industries in each state in Volume IX.

The present volume consists in large part of a series of chapters each dealing with a particular subject. There are also, however, six general tables which are designed to bring together the more important data in convenient form. These general tables reproduce many of the statistics which appear in the tables distributed through the various chapters, but they also contain additional information. Conversely, some of the chapters contain special analytical data not appearing in the general tables. These general tables may be briefly described as follows:

TABLE I. *Comparative summary for the United States, by industries: 1909, 1904, and 1899.*—This is a comparative table covering the last three censuses. It shows, for each census, the number of establishments in each industry; the number of persons engaged in the industry, distributed into three classes: The primary horsepower; the amount of capital; the amounts paid for salaries, wages, and materials, respectively; the value of products; and the value added by manufacture (value of products less cost of materials). It also shows the percentage of increase from 1899 to 1904 and from 1904 to 1909 in average number of wage earners and in value of products.

TABLE II. *Capital, expenses, value of products, persons engaged, and power and fuel, for the United States, by industries: 1909.*—This table is confined to the census of 1909 and covers, for each industry, the same subjects as are covered by Table I, but gives many more details, constituting, in fact, a substantially complete presentation of the census returns for each in-

dustry for 1909, the only exception being the number of wage earners employed, by months, which appears in Table 30, Chapter XI, and the statistics as to establishments classified according to character of ownership, size, and prevailing hours of labor—subjects which are covered by Chapters IX, X, and XII, respectively.

TABLE III. *Comparative summary, by geographic divisions and states: 1909, 1904, and 1899.*—This table contains, for all industries combined, in each geographic division and state, the same data which in Table I are shown for each industry in the United States as a whole.

TABLE IV. *Capital, expenses, value of products, persons engaged, and power and fuel, by geographic divisions and states: 1909.*—This table contains, for all industries combined in each state, the same data which are shown for each industry in the United States as a whole in Table II.

TABLE V. *Comparative summary—principal industries, by states: 1909, 1904, and 1899.*—This table presents comparative data for the censuses of 1909, 1904, and 1899, and relates to the 86 industries which in 1909 gave employment to 10,000 wage earners or more. It presents data for every state for which comparable figures are available, with the exception of those states where the publication of the data would directly or indirectly disclose the operations of individual concerns. It shows the same items as are shown for the country as a whole in Table I, except that no percentages of increase are given.

TABLE VI. *Number of establishments, persons engaged, power, capital, expenses, and products—industries, by states: 1909.*—This table is restricted to the census of 1909 and shows for each industry separate totals for all states which can be given without disclosing the operations of individual concerns. It gives somewhat fuller details than are given in Table V.

PROVISIONS OF LAW.

Thirteenth Census act.—The portions of the "Act to provide for the Thirteenth and subsequent decennial censuses," approved July 2, 1909, which refer particularly to the censuses of manufactures, are as follows:

The schedules of inquiries relating to manufactures * * * shall include the name and location of each establishment; character of organization, whether individual, cooperative, or other form; character of business or kind of goods manufactured; amount of capital actually invested; number of proprietors, firm members,

copartners, stockholders, and officers and the amount of their salaries; number of employees and the amount of their wages; quantity and cost of materials used in manufactures; amount of miscellaneous expenses; quantity and value of products; time in operation during the census year; character and quantity of power used, and character and number of machines employed.

The census of manufactures * * * shall relate to the year ending December thirty-first next preceding the enumeration of population and shall be confined to * * * manufacturing establishments which were in active operation during all or a portion of that year. The census of manufactures shall furthermore be confined to manufacturing establishments conducted under what is known as the factory system, exclusive of the so-called neighborhood household and hand industries.

The inquiry concerning manufactures shall cover the production of turpentine and rosin and the report concerning this industry shall show in addition to the other facts covered by the regular schedule of manufactures, the quantity and quality of turpentine and rosin manufactured and marketed, the sources, methods, and extent of the industry.

Whenever he shall deem it expedient, the Director of the Census may charge the collection of these statistics upon special agents or upon detailed employees, to be employed without respect to locality.

The form and subdivision of inquiries necessary to secure the information under the foregoing topics shall be determined by the Director of the Census.

And it shall be the duty of every owner, president, treasurer, secretary, director, or other officer or agent of any manufacturing establishment * * *, or other establishment of productive industry, whether conducted as a corporation, firm, limited liability company, or by private individuals, when requested by the Director of the Census or by any supervisor, enumerator, special agent, or other employee of the Census Office acting under the instructions of the said Director, to answer completely and correctly to the best of his knowledge all questions on any census schedule applying to such establishment; and any owner, president, secretary, director, or other officer or agent of any manufacturing establishment * * *, or other establishment of productive industry, who under the conditions hereinbefore stated shall refuse or willfully neglect to answer any of these questions, or shall willfully give answers that are false, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not exceeding ten thousand dollars, or imprisoned for a period not exceeding one year, or both so fined and imprisoned, at the discretion of the court. * * *

That the information furnished under the provisions of the next preceding section shall be used only for the statistical purposes for which it is supplied. No publication shall be made by the Census Office whereby the data furnished by any particular establishment can be identified, nor shall the Director of the Census permit any one other than the sworn employees of the Census Office to examine the individual reports.

Changes as compared with previous laws.—The foregoing statutory provisions under which the census of 1909 was taken differ comparatively little from those of the act of March 3, 1899, providing for the Twelfth Census. The changes with respect to the period covered by the census and with respect to the establishments to be canvassed are more fully discussed later.

The paragraph referring especially to the production of turpentine and rosin appears for the first time in the act of 1909. The turpentine and rosin industry would have been canvassed in any case as one of the manufacturing industries, but this paragraph calls for information additional to that covered by the regular census schedules.

The provision as to the confidential treatment of the statistics contained in the last paragraph above quoted also appears for the first time in the act of 1909, although in practice, as far back as 1890 at any rate, the returns for individual establishments have been treated as strictly confidential. It is essential to the success of the manufactures census that every concern should be assured explicitly by law that its business will not be disclosed to competitors, to the general public, to state and local officials, or even to officials of the Federal Government outside of the Census Bureau. Only with such pledge of confidential treatment can the Bureau of the Census expect manufacturers to furnish data promptly and accurately.

PERIOD COVERED.

As provided by law, the returns of manufacturing establishments for the Thirteenth Census relate to the calendar year 1909 or to the business year of such establishments corresponding most nearly to that calendar year. The statistics cover the operations of an entire year, except in the case of the comparatively few establishments which began or discontinued business during the year, in which case the reports cover only the time of actual operation. Establishments idle during the entire calendar year were not canvassed.

The quinquennial census of manufactures taken in 1905 similarly related to the calendar year 1904 or to the nearest corresponding business year, but under the act providing for the Twelfth Census the returns for that census were for the fiscal year of the establishments canvassed "having its termination nearest to and preceding the first of June, nineteen hundred." In the tables giving comparative statistics for two or more censuses in the present report it has been customary to refer to the figures in each case as relating to the calendar year next preceding the year in which the census was taken—1909, 1899, 1889, etc.—and it is probable that, as a matter of fact, at each of the censuses as far back as 1850 the major part of the totals given represent the business of the year so indicated. In the case of small establishments which do not prepare formal annual summaries of their business the returns for the censuses prior to 1904 doubtless very frequently related to periods other than the calendar year, but large business concerns which make such formal summaries use the calendar year as their business year much more often than any other twelve-month period, and the statistics for such concerns constitute a very great proportion of the totals for all concerns combined.

TERRITORY COVERED.

The Thirteenth Census, of which the census of manufactures of 1909 formed a part, covered the United States proper, also Alaska, Hawaii, and Porto Rico. The manufactures statistics for Alaska, Hawaii, and Porto Rico are presented entirely separate from

those of the United States proper, and are combined with the latter only in Table 1, Chapter II.

METHOD OF COLLECTING STATISTICS.

As a rule, the canvass of manufacturing establishments for the Thirteenth Census was made by special agents appointed especially to collect statistics of manufactures and of mines and quarries, although a number of regular clerks were detailed from the Census Bureau to assist in the canvass. In a few sparsely settled districts in which the establishments were difficult of access the statistics were collected by the enumerators employed to collect the statistics of population. The canvass, including that of mines and quarries, cost \$748,009.40, of which \$622,859.45 was paid as salaries, subsistence, and expenses to 1,227 special agents; \$99,515.53 to 76 clerical employees of the bureau detailed for field work; \$16,749.07 to 31 such employees detailed to offices in the principal cities; \$3,749.65 for expenses of offices in principal cities; and \$5,135.70 to enumerators. The work was begun soon after January 1, 1910, and was practically finished by November of the same year.

INDUSTRIES AND ESTABLISHMENTS CANVASSED.

Census of 1909 confined to factory industries.—The census of 1909, like that of 1904, was taken in conformity with the provision of law which directs that the canvass shall "be confined to manufacturing establishments conducted under what is known as the factory system, exclusive of the so-called neighborhood, household, and hand industries." No such restriction was provided by law in any of the Twelfth or earlier censuses.

There is no clearly defined and well recognized distinction between "factory" industries and neighborhood, household, and hand industries. All of these terms require interpretation. The Census Bureau adopted for the canvass of 1909, as for that of 1904, a somewhat broad construction of the term "factory system." It gave to the special agents and clerks collecting the statistics detailed instructions as to what establishments should and what should not be canvassed, including a long list of particular industries which should be omitted.

Broadly speaking, the instructions were to exclude the following classes of establishments:

(1) All establishments producing less than \$500 worth of products in 1909.

(2) Establishments doing only work to the order of the individual customer, such as custom tailoring, dress-making, millinery, and shoemaking establishments, the aim being to confine the census to establishments producing for the general or wholesale trade. Of course, this rule did not apply to large concerns, such as machine shops making machinery to special order.

(3) Establishments engaged in the building industries other than those manufacturing building materials for the general trade.

(4) Establishments engaged in the so-called neighborhood industries and hand trades, such as blacksmithing, harness making, and tinsmithing, in which little, if any, power machinery is used and which usually do only a local business.

(5) Retail stores which incidentally manufacture on a small scale, particularly where it is impossible to distinguish the data relating to the manufacturing business from those relating to the mercantile business.

(6) Educational, eleemosynary, and penal institutions engaged in manufacturing industries.

Most of the establishments of classes 3 and 4 would have been excluded in any case under the rule applying to those of class 2, their work being done mainly to individual order.

Manufacturing establishments operated by the Federal Government were canvassed, but the data are not included with those for other manufacturing establishments, but are separately presented (see Table 4, Chapter II).

It can not be supposed that the special agents in different parts of the United States succeeded in every case in interpreting these instructions exactly alike. The magnitude of the totals other than those for the number of establishments would not, however, be materially affected by differences in interpretation of the instructions, since the establishments as to which doubt might arise are in nearly all cases small establishments.

Scope of previous censuses.—As already stated, the census of 1899 and earlier censuses included establishments engaged in the neighborhood, household, and hand industries. The number of establishments canvassed was therefore relatively far greater at these earlier censuses than at those of 1904 and 1909;

but as the establishments of 1904 and 1909, household, and hand industries are for the most part the totals relating to capital, wage earners, materials, products, etc., were not augmented in anything like the same proportion as the number of establishments canvassed. For comparative purposes the statistics for 1899 have been revised so as to exclude the establishments which would not have been canvassed under the instructions for the later censuses, but the data for earlier censuses have not been so revised.

Custom sawmills and gristmills and steam laundries.—In only two respects did the scope of the census of 1909 differ from that of the census of 1904. In 1909 reports were secured for all flour and feed mills, gristmills, and sawmills (except those whose products were valued at less than \$500 in 1909), including even those engaged exclusively in custom business—that is, grinding or sawing for toll or for a fixed charge and not themselves owning the materials and products. In 1904 custom mills were not canvassed, and the revised data for 1899 likewise do not cover such mills. In order to preserve the comparability of the statistics the data for custom mills for 1909 have been separately tabulated and are not included in the general totals relating to all manufacturing industries (see Table 6, Chapter II).

In the second place, the census of 1909 was the first to include statistics for steam laundries. Before that laundries were not canvassed even at those censuses at which establishments engaged in the neighborhood, household, and hand industries were included. For the sake of comparability, however, the statistics have not been included in the general totals for manufacturing industries, but are shown separately (see Table 5, Chapter II).

Completeness of canvass.—Although, with the two exceptions just noted, the scope of the manufactures census of 1909 was intended to be the same as that of the census of 1904, it seems probable that the canvass for the later year was somewhat more complete than that for the earlier year, particularly with reference to small establishments, and that the increase in the number of establishments shown for a good many industries may be due, in whole or in part, to this more complete canvass rather than to a change in actual conditions. Even if this be the case, however, the comparability of the totals for items other than the number of establishments and the number of proprietors and firm members is not materially affected.

DEFINITION OF THE TERM "ESTABLISHMENT."

In census publications the term "establishment" means the manufacturing unit for which a single census report or schedule is secured. As a rule, the "establishment" corresponds to a plant as understood in ordinary usage; in other words, it represents a single plant or mill and represents it as an entirety.

Two or more plants sometimes counted as one establishment.—In some cases, however, the Census obtains

two or more plants operated under a common ownership and for which only one set of books of account is kept, and therefore counts them as one establishment. But if the plants having a common set of books are located in different states, or if a part of them are located in a city of 10,000 or more inhabitants, the plants in each state or in each such city are counted as separate establishments, and where necessary an estimated segregation of the required statistical items is made, so that the data published for each state or city may represent as nearly as possible the manufacturing operations actually conducted within its boundaries.

One plant sometimes counted as two or more establishments.—In some cases, on the other hand, a single plant is treated by the Census Bureau as comprising two or more establishments. This is done, of course, only where the plant has departments engaged in different branches of industry, and the object is to obtain, so far as practicable, complete statistics for each industry distinguished by the census classification. The most important cases in which two or more distinct industries are frequently conducted in a single plant, which for census purposes is treated as two or more establishments, are the following: The manufacture of coke in connection with blast furnaces; the manufac-

ture of coke in connection with mines; the operation of blast furnaces and of tin-plate mills in connection with rolling mills; the manufacture of clothing in connection with textile mills; the manufacture of sulphuric acid in connection with copper smelting; the manufacture of fertilizers in connection with cottonseed-oil mills and in connection with slaughtering and meat-packing establishments; and the operation of printing plants in connection with the manufacture of patent medicines and with other enterprises in which extensive printing of advertising matter is required. There are a number of other cases of less importance.

The number of instances where a single plant has been treated as consisting of two or more establishments is comparatively small, and the fictitious increase in the number of establishments due to this method of enumeration is much more than offset by the fictitious decrease due to the practice of counting two or more distinct plants operated under a single ownership as a single establishment.

STATISTICS OF PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.

A detailed discussion of the methods employed in presenting the statistics for wage earners and other persons engaged in manufacturing industries need not be given at this point, as the subject is fully treated in Chapter XI. It may be said briefly that at the census of 1909 the schedule distinguished the following classes: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks and other subordinate salaried employees, sometimes for brevity designated simply as "clerks" in the tables, and (5) wage earners. The statistics as to wage earners for 1904 and 1899 are closely comparable with those for 1909, but in the case of the other classes comparisons are less satisfactory.

For the censuses of 1899, 1904, and 1909 the average number of wage earners for the year was computed by adding the numbers reported for the several months and dividing the sum by 12. The object was to show the number of wage earners who would be required to perform the work accomplished during the year if all were continuously engaged. If a factory employed, say, a hundred wage earners, but was in operation only six months during the year, the method of calculation would show an average of 50 wage earners employed for the year. At the census of 1889 and possibly for prior censuses, such a factory would have been counted as employing 100 wage earners.

The census schedule for 1909 did not call for the number employed in each month for any class of employees other than wage earners, but in view of the fact that the numbers of the other classes do not vary materially from month to month, the returns are assumed to represent substantially the average number employed for the year.

The method of determining the sex and age distribution of wage earners is described in Chapter XI.

The statistics as to sex and age for 1909 are not absolutely comparable with those for 1904 and 1899, but in most industries they are closely enough comparable for all practical purposes.

STATISTICS OF CAPITAL.

Description of inquiry.—The census act of 1909, like those for prior censuses, directed that the schedule for manufacturing establishments should include an inquiry concerning capital. The following form of inquiry, which was substantially the same as that employed at the censuses of 1899 and 1904, was used at the census of 1909:

Capital invested: Amount of capital invested—owned and borrowed.—The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises.

Land, buildings, machinery, and tools....	\$.....
Materials, stocks in process, finished products, fuel, and miscellaneous supplies..	\$.....
Cash, plus trading and operating accounts and bills receivable.....	\$.....
Total.....	\$.....

Borrowed and rented capital.—It will be noted that this form of inquiry regarding capital calls for borrowed capital as well as for that owned by the proprietors of the establishment. In other words, the amount of the various classes of assets is called for without any deduction on account of liabilities whether current or of a more or less permanent character. It is obvious that capital borrowed by a manufacturer for constructing plants or conducting business is just as truly employed in the manufacturing industry as capital owned by him and similarly invested.

The census schedule, however, did not call for the value of rented property used by manufacturers. Although, strictly speaking, the value of such property is also a part of the capital used in manufacturing industries, yet on account of the difficulty of ascertaining that value no attempt was made to do so. The rental paid by manufacturers for the use of their plants was, however, called for as one of the items of miscellaneous expenses (see Table 1, Chapter VIII).

Classes of capital not distinguished in tables.—The inquiry on the schedule for 1909 called for three principal classes of capital separately. The distinction of these three classes was made rather with a view to conveying a correct understanding of what should be included in the total for all capital than with the expectation that accurate data for the separate items would be secured. As a matter of fact, while a majority of the establishments reported separate amounts for the three items, many failed to distinguish them, and in many other cases the separation was based

on estimate only. In some instances the entire amount of capital investment was—usually incorrectly—placed opposite one of the three items. In view of these conditions, it was not considered worth while to publish the statistics for the three classes of capital separately in the tables of the census reports, and accordingly only the totals for all capital are shown in such tables.

Defectiveness of statistics of capital.—The statistics of capital have been frequently referred to in the reports of previous censuses as defective and, in fact, almost worthless, and it has been repeatedly recommended by the census authorities that the inquiry should be omitted from the schedule. Experience at the census of 1909 confirms the belief that the statistics are of little value. There are, of course, some establishments which have accounting systems such that a correct return for capital can be made, but this is not true of the great majority canvassed, and the figures for capital do not show the actual amount of the capital invested in manufacturing enterprises.

There is no general agreement among manufacturers, accountants, and statisticians as to the proper standard of measurement of capital investment. Even, however, if the Census Bureau should adopt a definite standard, it would be quite impossible to secure returns uniformly conforming to that standard. The Census Bureau can not employ expert accountants to canvass the many thousands of manufacturing concerns—still less employ expert appraisers to determine whether the values assigned to capital by manufacturers are correct according to the standard prescribed. It is necessary to accept the figures for capital substantially as they appear on the books of the manufacturers or as estimated by them.

Some of the reasons why it can not be expected that uniform returns as to capital will be secured by census methods may be briefly mentioned:

(1) Many concerns have no capital accounts whatever. This is particularly true of small establishments owned by individuals or firms. The proprietors of such establishments may know the amount of capital originally invested, or the amount put in from outside sources, but they keep no record of the changes in capital resulting from the conduct of current business or from other causes.

(2) Capital invested in buildings and machinery always depreciates as the result of wear and tear unless maintained by further expenditure. The great majority of establishments make no allowances for depreciation on their books, and have no definite idea as to the relation between the original cost or value of buildings and machinery and their present value: nor in most cases do they know what it would cost to reproduce such property either wholly new or in its actual condition. On the other hand, some of the few large concerns which keep depreciation accounts write off more than the actual depreciation of their property.

(3) The invention of new machinery, the opening up of new supplies of raw material, or other changes in conditions of production, or changes in demand for the class of goods manufactured, may render worthless an investment in a manufacturing enterprise or greatly reduce its value. It would obviously be improper under such circumstances to report as the value of capital the amount of the original investment, even after deducting for ordinary depreciation, while, on the other hand, the assignment of a present value to property under such conditions must necessarily be arbitrary.

(4) The proprietors of many manufacturing establishments have purchased them as going concerns. In such cases they are likely to enter on their books as the value of the property the amount paid for it, which may bear no relation whatever to the original investment, or to the present physical valuation of the property, or to the cost of reproducing it.

(5) Some corporations engaged in manufacturing industries have issued capital stock and other securities in excess of the actual cost of their properties and assets, or even in excess of the capitalization of the present earning capacity of their plants according to prevailing capitalization rates. In such cases it frequently happens that an arbitrary value is assigned to the assets of the corporation in order to balance its securities, and this arbitrary value is likely to be reported to the Census Bureau rather than the actual value.

(6) Finally, it will be observed that under the form of inquiry used regarding capital in 1909 there is the possibility of very considerable duplication in the amounts reported by different concerns. The schedule did not call for any deduction from live capital—value of stocks of materials and of finished or partly finished goods, accounts receivable, cash, etc.—on account of current liabilities, since it was not believed that it would be possible to secure at all accurate results by calling for such a deduction. The accounts receivable and bills receivable of manufacturing concerns often represent in part money due to them for materials or services furnished to other manufacturing concerns, which in turn report such materials, or the products of such services, as part of their capital.

In view of these and other difficulties encountered in obtaining statistics of capital, it is proper to say that the statistics as actually published in the present census report and in previous census reports have almost no significance. They do not show with any close approximation to accuracy the relative amounts of capital actually invested in different industries or in different localities, nor do they furnish a correct measure of the increase from census to census in the amount of capital invested in all industries combined or in any particular industry. Changes in the method of calculating capital, or in the ownership or the form of organization of an establishment, may result in the

reporting of a much larger or much smaller amount at one census than at another without any corresponding change in the actual investment. The percentages of increase or decrease in the capital reported are in many cases so inconsistent with the percentages of increase or decrease in value of products, value added by manufacture, number of wage earners, and other items as to force the conclusion that the figures for capital are incomparable. There are, of course, good reasons why in some cases the statistics of capital should show a movement from census to census different from that of other items covered by the census inquiry, but these reasons can not explain all of the differences in the movements appearing in the statistics.

VALUE OF PRODUCTS AND VALUE ADDED TO MATERIALS BY MANUFACTURE.

Form of inquiry as to value of products and its significance.—The schedule for the census of 1909 contained the following instructions for the reply to the inquiry as to value of products:

Products: Value of products and work performed during the year.—Give the selling value or price at the factory or works, and account for all products manufactured during the year (whether sold or not), including by-products. The principal products should be enumerated separately and the total value given for each, which value should include that of the containers, if sold with the goods. Under "All other products, including amounts received for custom work and repairing," should be reported the total value of all products, other than those for which separate values are given, together with amounts received for custom work and repairing and work done on materials furnished by others.

In addition to the inquiry in the general schedule, there were in various special schedules used for important industries inquiries regarding the quantity and value of specified products.

It will be noted that the schedule called for the selling value or price of the products. The value, if correctly reported, thus includes the profit of the manufacturer.

The value called for was what may be called the net value at the factory. Some manufacturers sell goods at prices which include delivery, but the special agents collecting the statistics were instructed in such cases to deduct freight and other delivery charges wherever possible. Products are often sold on the basis of a list price subject to discount, and the instructions were that discounts should be deducted. In other words, every effort was made to secure the true net selling value of the products at the factory.

The inquiry called for the value of products manufactured during the year, and not the value of products sold during the year. In the case of a large majority of establishments the products manufactured during the year are substantially the same as the products sold, but there are important exceptions. The special agents were instructed, where the books of the manufacturers would permit, to ascertain accurately the value of the products manufactured by adding to the

amount of sales the increase in the value of the stock of manufactured goods (or of stocks in process of manufacture) on hand at the end of the year as compared with the beginning of the year, or by deducting from the sales the decrease in such stocks.

In the case of the repair shops of steam and street railroads, few if any products are manufactured for sale, but the work is done or the products manufactured solely or principally for the use and benefit of the railroads operating the establishments. In such cases the value reported usually represents the operating cost or cost of production, as no market value can be assigned to the work or the products and as it is not customary for such establishments to make any allowance for profit in assigning a value to them.

Somewhat akin to the case of railroad repair shops is that of establishments which make partly finished products, or containers and auxiliary articles, for the use of other manufacturing establishments under the same ownership. A wood-pulp plant, for example, may make pulp for use in a paper factory owned by the same concern. In such cases the Bureau of the Census accepted as the value of products the "transfer value" assigned by the manufacturer. Such transfer value is based sometimes on market prices, sometimes on cost of manufacture, and sometimes on an arbitrary basis.

The value of products in the case of certain establishments represents merely the receipts for work performed on materials or commodities. In many cases manufacturing establishments do not own the principal materials on which they work, or the finished products as they leave the plant. This is obviously the case where the work done consists simply in repairing articles owned by others. Another very common case of this sort is that of custom gristmills and sawmills, which grind grain or saw lumber belonging to farmers or others, receiving as compensation a percentage of the product or a fixed money payment. Again, many manufacturing establishments do not themselves perform all of the work upon the products which they turn out, but hire the services of other establishments for certain processes. The value of the products of the establishments which perform these processes is the compensation they receive for the work done, which is ordinarily called "contract work."

In the case of repair work it would obviously be absurd to report the value of the complete article after repair as a value produced by the establishment making the repairs. In the case of establishments which perform certain processes for other manufacturing establishments, the inclusion of the entire value of the article as it leaves their hands would involve a duplication, since the final value of the same article when completed is reported by the establishment for which the work is done. In the case of custom gristmills the custom work is not performed for other manufacturers, but for farmers and others, and in order to

ascertain the total value of manufactured products for the country it is proper to include an estimated value for the flour, feed, and other products turned out by such mills. Such estimates have accordingly been called for from the mills, or, where lacking, have been prepared by the Census Bureau, the estimated value of the materials being also obtained in the same way. A similar condition exists in the custom sawmills, but it was impracticable to prepare estimates of the value of the logs sawed or of the lumber produced.

A few industries are subject to heavy Federal internal revenue taxes. In the case of the distilled liquor industry the amount of tax collected by the Government greatly exceeds the total cost of manufacturing the product. The manufacturer of an article subject to internal revenue tax of course makes the price of his product high enough as a rule to cover the additional expenses. The value of products for such industries therefore includes substantially the amount of the tax, and may be much greater than would be the case if the industry were simply an ordinary manufacturing industry and not a special source of governmental revenue. The "value added by manufacture" similarly includes the tax. The amount of internal revenue tax was called for as one of the items of miscellaneous expenses (see Table 1, Chapter VIII).

Value added to materials by manufacture.—No manufacturing establishment as such produces the whole of any commodity. Manufacturing is a transformation of materials. The economic importance of the processes of manufacture can not be judged correctly by the quantity or value of the products leaving the factories, but must be judged by the addition to the utility or to the money value of the materials. The value created by the manufacturing processes is in most cases substantially the difference between the cost of the materials and the value of the products. In comparing manufacturing industries with one another this relation of the value of finished products to the cost of materials must be constantly borne in mind. One industry may turn out products valued at the same amount as those turned out by another industry, but the first may, by the manufacturing processes, have added several times as much value to the materials as the second.

For this reason, statistics of "value added by manufacture" are presented throughout the census reports of manufactures for 1909. These statistics in each case represent the difference between the value of products and the cost of materials. The value added by manufacture covers the expenses of the manufacturing operations—wages, salaries, and miscellaneous expenses—and the profit or return to the manufacturer. The statistics of value added by manufacture are particularly valuable because they are almost entirely free from the duplication that appears in the total value of products. In a few industries, however, there is some duplication even in this item,

due to the fact, already mentioned, that certain establishments do contract work on materials furnished by other establishments either in the same industry or in affiliated industries. In such cases the receipts for the work done are reported as value of products for the establishment doing the contract work, while the establishment for which the work is done reports the entire value of the finished product, in which is included the value attributable to the contract work. The total expenditures for contract work in all manufacturing industries in 1909, however, were only \$178,645,635, equal to only 2.1 per cent of the value added by manufacture, and not all of this amount represents duplication.

It should be added that it is sometimes contended that in deducting cost of materials in order to arrive at "value added by manufacture," the cost of fuel, payments for rent of power, and the cost of lubricants and other "mill supplies" ought not to be treated as part of the cost of materials, but that the expenditures for these purposes should rather be looked upon as expenditures upon those materials which become a constituent part of the product. Something may be said in favor of this view, but in any case it is scarcely possible in practice to distinguish the cost of such materials from that of others. It was impossible to distinguish the cost of mill supplies from other materials, and in many cases the cost or part of the cost of fuel and power can not be separated. In particular, freight charges on all materials were often reported as a single item, including the charges on fuel and mill supplies, as well as on those materials which become a constituent part of the product. Consequently, it has been deemed preferable in all cases to deduct the total cost of materials, including fuel and mill supplies, from the value of products in calculating the value added by manufacture.

Duplication in value of products.—The value of products as reported by manufacturing establishments duplicates to a large extent the value of products of the industries producing raw materials—the agricultural, mining, and fishery industries. This, however, is by no means the only duplication involved in the census statistics of value of products. There is even greater duplication within the manufacturing industries themselves, due to the fact that the products of one establishment frequently become the materials for other establishments, and in small measure to the practice of "contract work," before mentioned. The total value of products as shown in the census reports is simply the sum of the amounts reported by all establishments.

It would be highly desirable, if practicable, to ascertain the value of the products of manufacturing industries exclusive of duplication within those industries themselves but without excluding the cost of the original raw materials derived from nonmanufacturing industries. At the censuses of 1899 and 1904 an attempt was made to eliminate the duplication within the manufacturing industries themselves

(other than that due to contract work) and the resulting figure was designated as the "net value" of the products of manufacture, an item which must be clearly distinguished from the item "value added by manufacture." In order to obtain this figure each manufacturer was called upon to distinguish the value of the partly manufactured materials used by him from that of the strictly raw materials derived from nonmanufacturing industries. Many manufacturing establishments, even though keeping an accurate account of the total cost of materials, do not record the cost of each separate class of materials, and can distinguish the cost of strictly raw materials from that of partly manufactured materials only by rough estimates. Moreover some manufacturers, and some special agents collecting data from them, apparently failed to treat as partly manufactured certain materials of a rather crude character which as a matter of fact had been subjected to some manufacturing process and had been reported as products by other establishments included in the census of manufactures. Further difficulty arose with reference to partly manufactured materials imported from other countries.

The statistics published were chiefly valuable as showing in a rough way the great magnitude of the duplication in value of products within the manufacturing industries. The total value of manufactured products for 1904, including duplication, was given as \$14,793,902,563, and the cost of partly manufactured materials as \$4,977,369,337, leaving as the "net value of products" \$9,816,533,226. Whatever the margin of error in the figures thus obtained, it is obvious that the duplication in value of products within manufacturing industries represents a very considerable fraction of the total value obtained by adding the amounts reported by the several establishments.

This duplication affects not only the total value of products for all manufacturing industries combined, but also, though usually to a much less extent, the totals for individual industries. It often happens that one establishment assigned to a given industry by the Census Bureau turns out partly finished products which become the materials of another establishment in the same industry. For example, the value of products of cotton-yarn mills is largely duplicated in that of mills which weave cotton cloth, yet the returns of mills of both classes are included in one total. To eliminate correctly the duplication in value of products within an industry is even more impracticable than the elimination of duplication in all manufacturing industries combined.

To some extent the amount of duplication in value of products depends upon the system of bookkeeping of individual concerns and the methods followed by them in the preparation of the census schedules. For instance, if a company engaged in the slaughtering and meat-packing industry and also in the

manufacture of fertilizers keeps separate accounts for the two branches of the industry, the concern will ordinarily be treated as two establishments, and separate schedules will be prepared, the report for the slaughtering "establishment" including, under value of products, that of materials turned over to the fertilizer plant, which in turn will report its value of products. Another concern, however, manufacturing under precisely similar conditions but not keeping separate accounts for the manufacture of fertilizers, will necessarily be treated as one establishment and will make but a single census return, the value of finished fertilizers being included with that of other products. In the one case there is duplication in value of products, but not in the other.

Comparisons as to the relative importance of different industries based on value of products are in some cases rendered misleading by the fact that there is a greater amount of duplication in that value in one industry than in another. Comparisons between different censuses as to the value of products of all industries combined, or of individual industries, may also be rendered misleading by changes in the relative importance of duplication in value of products from one census to another. This subject is further discussed elsewhere (see Chapter III).

MONEY AS A STANDARD OF MEASUREMENT.

A large proportion of the census statistics of manufactures are necessarily expressed in terms of money. Capital, value of products, cost of materials, miscellaneous expenses, wages, and salaries are all so expressed.

It is obviously impracticable to compare the importance of different manufacturing industries at a given time by considering the quantities of products which they turn out. Tons of pig iron can not be compared with yards of cloth. Except for the fact that in some industries there is a greater duplication in value of products than in other industries, the value of products as expressed in money is a fairly satisfactory measure of the relative importance, to the public considered as a purchaser, of the commodities produced. Broadly speaking, moreover, the relative importance of the real contribution of each manufacturing industry, as a manufacturing industry, to the production of the nation may, for any given census, be roughly determined from the value added to materials by manufacture.

On the other hand, changes in the purchasing power of money from census to census may affect very materially the validity of conclusions as to the progress of manufacturing industries drawn from the statistics expressed in terms of money—whether from the statistics of value of products or from those of value added by manufacture, or even from those of wage payments.

It should be noted, in the first place, that at the census of 1869 the values were expressed in a currency

which was at a great discount as compared with gold. In order to make the figures for that census comparable with those for other censuses, when the business of the country was conducted on a gold basis, it is necessary to reduce the figures by about 20 per cent.

In the second place, the purchasing power even of gold has varied materially from time to time. While the prices of individual commodities may fluctuate in relation to one another, by reason of a great variety of causes, changes in the general level of prices for all commodities represent simply changes in the value of the gold dollar. It would be inexpedient in the present report to enter into elaborate details as to the history of the purchasing power of money during the period covered by the census statistics of manufactures. The subject is exceedingly complicated, and it would be difficult to draw exact conclusions as to the extent to which changes in the value of the dollar have affected the statistics for the several censuses. It is important to note, however, that comparisons for the censuses of 1909, 1904, and 1899 are materially affected. During the decade 1899–1909 there was an almost constant advance in the average prices of commodities in general. Some commodities, of course, showed no advance, and some advanced much more than others, but on the average there was a material advance, or, in other words, a material decline in the value of the gold dollar as measured by commodities. The result is that the census figures for value of products, cost of materials, and value added by manufacture show, as a rule, larger increases than those for the quantities of manufactured products turned out or of materials consumed, so far as those quantities were ascertained.

It would be exceedingly desirable, if practicable, to measure the increase in the output of manufacturing industries, individually and collectively, on the basis of quantities of things produced rather than of values. Were it possible to obtain comparable statistics from census to census as to the quantity of every commodity produced by manufacturing establishments, a general expression of the average quantitative increase in the production of manufactured articles could be computed. This could be done in various ways. One of the simplest methods would be—in the case of a comparison between 1899 and 1909, for example—to ascertain the value of the total quantity of each article produced in 1909 on the basis of the average value of that article as reported for 1899, to add up the values thus calculated for all commodities, and to compare this total with the total value of the same commodities as actually reported in 1899. Whatever increase appeared between the total for 1899 and that for 1909 would obviously be attributable only to increase in quantities. This comparison would therefore indicate the average percentage of increase in the quantity of products, each product being given a weight in the average proportioned to its value. The

procedure above described has been followed by the Census Bureau in connection with the statistics of agricultural crops for 1899 and 1909, and it is worth while to note the fact that, whereas the value of the crops of the country (excluding certain minor crops for which comparable statistics are not available) in 1909 was about 83 per cent greater than the value of the same crops in 1899, yet on the average the increase in quantity produced was only 10 per cent. In other words, the average increase in prices of farm crops was nearly 67 per cent.

From a rough examination of such census statistics of quantities of manufactured articles as are available, it appears that in all probability the average prices of manufactured articles did not advance as much between 1899 and 1909 as those of agricultural crops. It is quite impossible, however, to obtain complete and comparable statistics of the quantities of manufactured articles produced in different census years, so as to furnish a basis for a calculation of the average percentage of increase. In fact, for a large proportion of manufactured products the Census Bureau has never found it practicable to call for quantities.

The difficulty lies primarily in the fact that the number of different commodities and grades of commodities produced by manufacturing industries is enormous, and in the fact that many of the commodities are not standardized. In some cases there is no uniformity in products at all; each individual article made is unique. Even in industries where articles of similar character are produced in considerable numbers, to obtain quantities for each grade of each commodity would necessitate an immense expenditure of time and money. In fact, entire accuracy and completeness could not be secured with any expenditure, because, in many industries, it would be impossible to obtain a description of each grade of each commodity made by a given establishment sufficiently precise to permit identification thereof with the corresponding product of another establishment, and thus to permit the totalization of articles by grades. It would be still further from the range of possibility to make sure that the descriptions of articles and grades given at one census corresponded exactly with those given at another census.

It might be possible at future censuses to compute the average increase in quantities for a sufficient number of important manufactured products to give some clue to the general quantitative movement of production, but the data at present available are not sufficient for such a computation even of the roughest character.

Average unit values based on census returns usually not significant.—The considerations just presented as to the census statistics of products should be borne in mind when any attempt is made to determine from them the average value or price of even a single class of manufactured goods. In the case of most commodities for which the Census Bureau obtains statistics of both

quantities and values, it is impossible to determine correctly the movement of prices by dividing the values reported from census to census by the quantities, since the statistics do not distinguish in detail the grades and varieties of the commodities in question. For example, the census statistics specify the number of automobiles using different kinds of power and intended for different purposes which were manufactured during the census year, and the value of automobiles of each class; but each of the classes so distinguished includes a variety of sizes, styles, and grades of machines, some of which are of much higher value than others, so that an average value calculated from the statistics would have very little significance, and the averages for different censuses would not be comparable because of changes in the proportion of the different kinds included in a given class. Of course, there are a few articles which are sufficiently standardized to permit fair comparisons of average values from time to time on the basis of census returns.

Increase in quantity usually not comparable with increase in value.—It is obvious, further, that in the many cases where average values of commodities based on the returns for different censuses are not comparable, the percentages of increase in quantity are no more comparable with the percentages of increase in value. Changes in the proportion of the different grades or subclasses included in a general group may result in showing a greater or a less percentage of increase in value than in quantity, even though there has been no change in the unit prices of comparable commodities.

STATISTICS OF MATERIALS.

Description of inquiry.—The following instructions were given in regard to the inquiry concerning materials in the general schedule for the census of 1909; the form used at the two preceding censuses of manufactures was substantially similar.

Materials, mill supplies, and fuel: Total cost of all used during the year covered by this report.—This inquiry relates to all materials and mill supplies of every description, whether raw or partly manufactured, or whether entering into the product, used as containers, or consumed in the process of manufacture, and all fuel whether used for heat or power or in process of manufacture, as in making coke, gas, or pig iron. The data should embrace the cost only of these articles that were actually used during the year covered by the report. Materials produced by the establishment itself and used by it for further manufacture should not be included. If freight paid on materials is kept in a separate account, enter in the proper line below; otherwise include the cost in answers to the first two items.

In addition to the inquiry in the general schedule used for every manufacturing establishment, there were in various special schedules used for certain individual industries inquiries regarding the quantity and cost of specific materials used. The statistics obtained by these special schedules are presented in Volumes IX and X.

The total cost of materials as shown in the census reports includes not only that of materials which be-

come component parts of the product, but also that of materials essential to production by machinery, such as fuel and lubricants, as well as that of articles necessary for the conveyance of the product to the consumer, such as packing boxes, cans, and crates.

The schedule was designed to ascertain the cost of materials delivered at the factory. In many cases the reports gave directly the cost of materials so delivered, while in other cases the freight charges paid by the manufacturer on materials were reported as a separate item. (For a further discussion of the matter of freight charges, and of the distinction between the two main classes of materials—fuel, including rent of power, on the one hand, and all other materials, on the other hand—see Chapter VIII.)

The schedule called for the cost of materials used during the year, which in some cases is different from that of materials purchased during the year. In the case of concerns keeping detailed and accurate accounts, it was possible to obtain the cost of materials actually used by deducting from the amount of the purchases made during the year the increase in the value of the stock of materials on hand at the end of the year as compared with that at the beginning, or by adding the decrease in the value of such stock. In some cases, however, the cost of materials actually used during the year could be given only by estimate, and it is probable that in some instances the figure reported represented rather the cost of materials purchased than the cost of materials used. In a large proportion of the establishments, however, the materials used during the year are substantially the same as those purchased.

Reference has already been made, in the discussion relating to value of products, to the fact that it sometimes happens that the materials used by one establishment are the products of another establishment operated by the same concern, and that the cost assigned to such materials and reported by the establishment using them in further processes of manufacture may be more or less arbitrary.

The total cost of materials as shown in the census reports represents simply the sum of the amounts reported by all establishments. From what has been said regarding the duplication involved in the statistics of the value of products of manufacturing industries, it is obvious that there is also extensive duplication in the total cost of materials reported, due to the use of the products of one establishment as the materials of another. The tannery, for example, reports under cost of materials the cost of hides, and the shoe factory the cost of the leather made from the hides.

The statements presented in connection with the discussion of value of products as to the effect of changes in the purchasing power of money upon the value reported, and also as to comparisons of average

unit values and comparisons of the increase in quantity with the increase in value in case of specific products, all apply with equal force to the statistics regarding materials.

MISCELLANEOUS EXPENSES AND RELATION OF TOTAL REPORTED EXPENSES TO VALUE OF PRODUCTS.

A full discussion of the significance of the statistics of "miscellaneous expenses" is presented in Chapter VIII. At this point it is sufficient to state that the miscellaneous expenses reported at the census of 1909 did not include depreciation or interest payments, while at prior censuses interest payments were included, so that the data are not strictly comparable.

Census statistics do not show profits.—Interest payments should properly be excluded from operating expenses, because borrowed capital is treated as part of the total capital invested in manufacturing enterprises, and interest on such capital is therefore part of the general return on capital. On the other hand, the omission of depreciation charges, although necessary because of the impossibility of obtaining correct information, has a very important bearing upon the use of the census statistics of expenses. In most industries depreciation is a very important element in the true cost of manufacture. The sum of the reported expenses—salary and wage payments, cost of materials, and miscellaneous expenses—can not therefore be taken as representing the total cost of production, nor be used, by comparison with value of products, to determine the amount of profit made by manufacturing establishments.

There are also other reasons, more fully set forth in Chapter VIII, why census statistics of manufactures should in no case be assumed to show at all accurately either the cost of production, the amount of profit, or the rate of return on the investment.

STATISTICS OF SALARY AND WAGE PAYMENTS.

The inquiry as to salary and wage payments at the census of 1909 was very simple, calling merely for the aggregate amount paid to each of the following classes: Salaried officers of corporations; superintendents and managers; clerks, stenographers, salesmen, and other salaried employees; and wage earners, including pieceworkers. No attempt was made, as at the censuses of 1899 and 1904, to ascertain the number of persons employed at different rates of pay, nor even to segregate the amounts paid to men, to women, and to children employed as wage earners.

Average wages not calculated.—The Census Bureau has not undertaken to calculate the average annual wages or earnings of wage earners in manufacturing industries as a whole or in any individual industry. The only figure which could be calculated on the basis of the returns for 1909 would be a single average for

all wage earners combined, covering persons of both sexes, of all ages, and of all degrees of skill. Such a broad average would have very little significance, being based upon widely varying rates of individual compensation.

Furthermore, it should be noted that such a calculated average would not in any case show the average annual earnings of wage earners, since the average number of wage earners from which it would have to be calculated does not represent the actual number of different persons engaged in manufacturing industries, but represents the number who would be required to perform the work accomplished if all were continuously employed.

Relation of wages to value of products.—Certain careless users of census statistics have in the past undertaken to make a comparison between the value of manufactured products as shown by the census and the amount paid as wages. They have referred to the reported value of products as being the value created by labor and to the amount paid out in wages as being the share of the product received by labor. Any such comparison is absolutely misleading. In the first place, the total value of manufactured products includes the cost of materials produced by nonmanufacturing industries, and a large part of the cost of such materials, in turn, is attributable to labor the wages of which are not included in the returns for manufactures. In the second place, there is, as already stated, an enormous duplication of value of products within the manufacturing industries themselves, due to the use of the products of one establishment as the materials for other establishments. The wages paid by the manufacturer of the partly finished material are included in the value of his product and included again in the value of the product of the establishment using that material in further processes of manufacture. In other words, wage payments, as well as other expenses, are extensively duplicated in the value of products, but not at all in the returns of wage payments themselves.

RELATION BETWEEN STATISTICS OF MINES AND QUARRIES AND OF MANUFACTURES.

Coincident with the census of manufactures of 1909, a census of the mining and quarrying industries of the country was taken, including the petroleum and natural gas industries, which are, for convenience, spoken of as mining industries. The Twelfth Census did not include an enumeration of mines and quarries, but such an enumeration was made for the year 1902.

In some cases it is impossible to make a sharp distinction between mining and quarrying operations, on the one hand, and manufacturing operations on the other. Both are frequently conducted by the same concern. Strictly speaking, mining and quarrying operations cease as soon as substances have been

removed from the earth, and all processes thereafter performed on those substances are in the nature of manufacturing. To attempt to make this distinction rigidly in every case in the census statistics, however, would involve a very large amount of estimate, and would, moreover, go contrary to the ordinary conceptions of the operators of mines and quarries as to the scope of the mining and quarrying business. The crude products of mines and quarries, after they leave the ground, are almost always subjected to a certain amount of manipulation at the mine or quarry itself. They have to be crushed, separated, washed, burned, calcined, concentrated, cut, polished, or otherwise modified before they are regarded as marketable commodities. Even coal is often broken up and sorted according to size at the mines. All such work is theoretically in the nature of manufacture, but when of a simple character it is not ordinarily considered as manufacture by those in the industry. Consequently, in those cases where the quasi-manufacturing processes applied to the crude products at the mine or quarry are of a very simple character, the business as a whole is treated as pertaining to the mining and quarrying industry, and no part of the statistics relating to it are segregated for inclusion with the returns for manufactures.

On the other hand, in many cases there are applied to materials at the mine or the quarry manufacturing processes of a character so elaborate that it is most desirable to take them into consideration in the census of manufactures. This desirability is particularly great in those instances where the same kinds of manufacturing processes are in certain cases conducted at the mine or quarry and in other cases by establishments distant from the mines or quarries and not operated under the same ownership. For example, there are many concerns which operate copper mines and in immediate conjunction therewith operate smelters for handling copper ore, sometimes keeping only a single set of books for both branches, while at the same time there are other copper smelters distant from mines and under separate ownership. If the statistics of manufactures are to cover the copper-smelting industry completely, it is obviously necessary to include data relating to those smelters which are operated in immediate conjunction with mines.

The policy actually pursued by the Census Bureau at the Thirteenth Census with respect to industries on the border line between mining and manufacturing has been as follows:

(1) In the case of most of those industries in which there were establishments which conducted both mining or quarrying operations and manufacturing operations of a more or less elaborate character, the data for each such establishment, as a whole, have been included in the census statistics of mines and quarries and also in the census statistics of manufactures.

(2) In the case of the coal and coke industry and the copper industry, however, if an establishment conducted at the same time mining and manufacturing operations, the data for both have been included in the statistics for mines and quarries, but in connection with the statistics of manufactures only data relating to the manufacturing branch have been included; if separate accounts were not kept, by means of which accurate data could be reported, as was sometimes the case, an estimated segregation has been made. The statistics of coke manufacture and of copper smelting contained in the reports for manufactures thus relate only to the manufacturing branch of the business. In cases where they are conducted at the mines the cost of materials as presented in the statistics for manufactures includes a value, sometimes more or less arbitrary, assigned to the coal or ore as produced by the mine. On the other hand, in the mining statistics the value of the product for bituminous coal mines and copper mines having coke ovens or smelters includes the value of the finished product of the ovens or smelters, duplication being avoided by assigning no value to the coal or ore. In a few cases a similar policy has been pursued with respect to establishments in other industries.

(3) On the other hand, in the case of a few industries simple and inexpensive mining or quarrying operations are conducted in connection with a business in which much the greater part of the activities are of a manufacturing character. These are treated only in the statistics for manufactures. This is the case with the brick and tile, cement, lime, and pottery industries.

The reason why the Census Bureau thus adopted a different policy in the case of some border-line industries from that adopted in the case of others was one of practical convenience. In the case of most industries in which the manufacturing operations are conducted in conjunction with mining and quarrying, the two branches are so intimately associated that a segregation of the statistics could be made only on the basis of the roughest kind of estimates. In the case of the bituminous coal and copper mines operating, respectively, coke ovens and smelters, however, the two branches of business are usually much more sharply divided, and many of the establishments were able to furnish for the two separately either accurate statistics or estimates approaching closely to accuracy. In the case of industries of the third group, again, these operations of manufacturing and of mining or quarrying are so intimately associated that segregation would be almost impossible, and in view of the minor importance of the mining or quarrying operations it seemed best to include the data only in the statistics for manufactures.

The following table shows, for 1909, the principal items of the manufactures statistics as contained in

the present volume, side by side with the corresponding items relating to mines and quarries as published in the volume dealing with that subject, together with figures showing the numbers or amounts which have been included both in the statistics for manufactures and in those for mines and quarries.

Table 1	Statistics of manufactures.	Statistics of mines and quarries.	Amounts included in statistics for both manufactures and mines and quarries.
Employees.....	7,405,313	1,109,410	77,169
Salaried employees.....	790,267	44,127	3,973
Wage earners.....	16,615,046	1,065,283	73,196
Capital.....	\$18,428,269,706	\$3,380,523,841	\$199,368,976
Expenses:			
Services.....	4,365,612,851	640,167,630	43,716,537
Salaries.....	938,574,967	53,393,551	4,842,929
Wages.....	3,427,037,884	586,774,079	38,873,608
Materials.....	12,142,790,878	247,866,304	34,645,922
Miscellaneous.....	1,945,685,870	154,608,759	7,859,109
Value of products.....	20,672,051,870	1,238,410,322	216,347,593

¹ Average number.

² Number December 15, or nearest representative day.

³ Includes royalties and amount paid for contract work.

It should be clearly understood that in the case of the statistics of materials and of value of products the figures in the last column of this table by no means represent the full magnitude of the duplication of data for mines and quarries in the data for manufactures. Almost the entire product of mining and quarrying industries is used as raw material in manufacturing industries, and the value of products of the former largely appears as cost of materials for the latter. To add together the value of products of manufacturing industries and the value of products of mines and quarries, as shown in the table, would give a total having no real significance, and it is of course equally beside the point to add together the figures for cost of materials for the two great branches of industry.

The figures as to duplication of cost of materials and value of products given in the last column of the table represent merely the sum of those items which have been directly, as such, counted twice, once in the statistics for manufactures and once in those for mines and quarries. For example, the case may be taken of an establishment engaged in quarrying stone and making grindstones at the quarry, the total value of whose product in the form in which it leaves the establishment is \$10,000. This \$10,000 would appear in the value of products of manufacturing industries and also in the value of products of mines and quarries, and would consequently enter into the total shown as duplication in the third column of the table. On the other hand, if a quarrying establishment produced stone valued at \$5,000 and sold it to a manufacturing establishment which converted it into grindstones worth, say, \$10,000, no duplication would be shown in the third column of the table, but it is obvious that the

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actual value of the final product of the two establishments would be \$10,000 and not \$15,000, which would be the sum of the values actually entering into the statistics.

On the other hand, in the case of the items covered by the table other than cost of materials and value of products, there is some significance in adding the figures for manufactures to those for mines and quarries and deducting the duplication shown in the third column of the table. By this method it appears that the average number of employees in mining and quarrying and in manufacturing industries combined in 1909 was 8,437,554, of which number 830,421 were salaried employees and 7,607,133 were wage earners. The total expenditure of the two groups of industries for salaries amounted to \$987,125,589, the total for wages, to \$3,974,938,355, and the total for miscellaneous expenses to \$2,092,435,520.

The following table names the mining industries in which there were in 1909 establishments all or part of the statistics for which were included with the statistics for manufactures as well as with those for mines and

quarries, and shows for each the amount of direct duplication in the number of wage earners and the value of products.

INDUSTRY.	TOTALS APPEARING IN STATISTICS OF MINES AND QUARRIES.		NUMBERS OR AMOUNTS DIRECTLY DUPLICATED IN STATISTICS OF MANUFACTURES.	
	Wage earners.	Value of products.	Wage earners.	Value of products.
Total	744,602	\$679,161,596	73,196	\$216,347,593
Bluestone.....	2,175	1,588,406	945	839,942
Coal, bituminous.....	599,789	427,962,464	26,878	67,666,042
Copper.....	53,143	134,616,987	6,596	107,426,714
Feldspar.....	325	271,437	65	89,569
Kuller's earth.....	245	315,762	56	58,234
Granite.....	20,561	18,997,976	12,314	12,234,451
Graphite.....	404	344,130	35	29,983
Gypsum.....	3,778	5,812,810	2,697	4,823,871
Lead and zinc.....	21,603	31,263,094	659	4,444,500
Limestone.....	37,695	29,832,492	3,660	3,955,672
Marble.....	6,313	6,239,120	4,448	4,110,020
Peat.....	182	109,047	72	40,280
Quartz.....	184	231,025	76	90,560
Sandstone.....	9,908	7,702,423	3,000	2,461,713
Slate.....	9,438	6,054,174	9,380	6,025,393
Talc and soapstone.....	1,336	1,174,516	1,247	1,082,974
Traprock.....	6,260	5,578,317	289	271,407
All other industries.....	1,163	967,416	779	696,262

¹ Includes "barytes," "gripstones," "mineral pigments," "scythstones," "tripoli," and "whetstones."

CHAPTER II.

GENERAL SUMMARY FOR THE UNITED STATES.

Continental United States and noncontiguous territories: 1909.—The following table gives for 1909 the most important figures for the manufactures of continental United States and of Alaska, Hawaii, and Porto Rico. The table does not cover possessions of the United States other than those mentioned. The statistics of manufactures for the Philippine Islands secured at the census taken by the War Department for 1902 are not comparable with those shown in the reports for continental United States; and there has been no census of manufactures in Guam, Tutuila, or

the Canal Zone. The statistics for Alaska, Hawaii, and Porto Rico include returns for some small establishments engaged in hand or neighborhood industries, such as were omitted from the canvass for continental United States.

The data given in this table, as in all other tables giving statistics for 1909 for all industries combined, do not include the returns for custom sawmills and gristmills, or for laundries, or for establishments operated by the Federal Government. Data for these classes of establishments are presented elsewhere.

Table 1	NUMBER OR AMOUNT.				
	Total.	Continental United States.	Alaska.	Hawaii.	Porto Rico.
Number of establishments.....	270,082	268,491	152	500	939
Persons engaged in manufactures.....	7,707,751	7,678,578	3,479	7,572	18,122
Proprietors and firm members.....	275,952	273,265	135	1,074	1,478
Salaried employees.....	792,168	790,267	245	594	1,062
Wage earners (average number).....	6,639,631	6,615,046	3,099	5,904	15,582
Primary horsepower.....	18,755,286	18,675,376	3,975	41,930	34,005
Capital.....	\$18,490,749,206	\$18,428,269,706	\$13,060,116	\$23,874,999	\$25,544,385
Expenses.....	18,526,435,292	18,454,089,599	9,453,126	31,753,095	31,139,472
Services.....	4,375,634,216	4,365,612,851	2,327,780	2,795,357	4,898,228
Salaries.....	940,900,207	938,574,967	379,754	686,454	1,259,032
Wages.....	3,434,734,009	3,427,037,884	1,948,026	2,108,903	3,639,196
Materials.....	12,195,019,092	12,142,790,878	5,119,613	25,629,309	21,479,292
Miscellaneous.....	1,955,781,984	1,945,685,870	2,005,733	3,328,429	4,761,952
Value of products.....	20,767,545,597	20,672,051,870	11,340,105	47,403,880	36,749,742
Value added by manufacture (value of products less cost of materials).....	8,572,526,505	8,529,260,992	6,220,492	21,774,571	15,270,450

The total value of manufactures in the area covered by this table in 1909 was \$20,767,545,597, of which 99.5 per cent was contributed by continental United States, the manufactures of Alaska, Hawaii, and Porto Rico being comparatively unimportant. The most important industry in Alaska is the canning and curing of fish; that in Hawaii is the manufacture of sugar; and in Porto Rico the leading industries are the manufacture of sugar and of tobacco products, and the preparation of coffee for the market.

The above table is the only one in this volume in which the statistics for the noncontiguous territories are included, all the other tables relating exclusively to continental United States. Sections on the manufactures of Alaska, Hawaii, and Porto Rico are given in Volume IX.

General comparison for the United States: 1909, 1904, and 1899.—Table 2 gives the principal items of information secured through the census inquiries relative to manufactures in continental United States for 1909, 1904, and 1899, together with the percentages of increase from census to census.

In 1909 the United States had 268,491 manufacturing establishments, which gave employment during the year to an average of 7,678,578 persons, of whom 6,615,046 were wage earners. These manufacturing establishments paid \$4,365,612,851 in salaries and wages, and turned out products to the value of \$20,672,051,870, to produce which materials costing \$12,142,790,878 were used. The value added by manufacture—that is, the difference between the cost of materials and the total value of products—was \$8,529,260,992. This figure best represents the net wealth created by manufacturing operations, because the gross value of products includes the cost of the materials used, which are either the products of nonmanufacturing industries, such as agriculture, fisheries, and mining, or else the products of other manufacturing establishments. The value of products derived from this latter class of materials gives rise to a duplication in the total value of products for manufacturing industries, inasmuch as the value of these materials has already figured in the value of products reported for the establishments manufacturing

them in the first instance; in some cases, indeed, where a given product has passed through several distinct stages of manufacture in different establishments before reaching its final form, this duplication may be repeated several times. All such duplications, as well as the original value of materials, are, however, eliminated in the figures for value added by manu-

facture, the only duplication remaining being that due to "contract work," which is small in amount (see Chapter I). The value added by manufacture covers salaries and wages—which represent over one-half of the total—overhead charges, depreciation, interest, taxes, and other expenses incidental to manufacturing, as well as the profits of the undertaking.

Table 2	NUMBER OR AMOUNT.			PER CENT OF INCREASE.		
	1909	1904	1899	1899-1909	1904-1909	1899-1904
Number of establishments.....	268,491	216,180	207,514	29.4	24.2	4.2
Persons engaged in manufactures.....	7,678,578	6,213,612	(¹)	(¹)	23.6	(¹)
Proprietors and firm members.....	273,265	225,673	(¹)	(¹)	21.1	(¹)
Salaried employees.....	790,267	519,556	364,120	117.0	52.1	42.7
Wage earners (average number).....	6,615,046	5,468,383	4,712,763	40.4	21.0	16.0
Primary horsepower.....	18,675,376	13,487,707	10,097,893	84.9	38.5	33.6
Capital.....	\$18,428,269,706	\$12,675,580,874	\$8,975,256,496	105.3	45.4	41.2
Expenses.....	18,454,089,599	13,138,259,842	9,870,426,102	87.0	40.5	33.1
Services.....	4,365,612,851	3,184,884,275	2,389,132,440	82.7	37.1	33.3
Salaries.....	938,574,967	574,439,322	380,771,321	146.5	63.4	50.9
Wages.....	3,427,037,884	2,610,444,953	2,008,361,119	70.6	31.3	30.0
Materials.....	12,142,790,878	8,500,207,810	6,575,851,491	84.7	42.9	29.3
Miscellaneous.....	1,945,685,870	1,453,167,757	905,442,171	114.9	33.9	60.5
Value of products.....	20,672,051,870	14,793,902,563	11,406,926,701	81.2	39.7	29.7
Value added by manufacture (value of products less cost of materials).....	8,529,260,992	6,293,694,753	4,831,075,210	76.5	35.5	30.3

¹ Figures not available.

For reasons fully set forth in Chapter I the difference between the total expenses shown in Table 2 and the value of products should not be taken as representing the profit of the manufacturers. The ratio between the amount paid as wages and the total value of products should not be taken as in any way indicating the proportion which labor obtains of the product created by manufacturing industries (see p. 28). The average annual wages of wage earners, if obtained by dividing the amount of wages reported by the average number of wage earners, would not show average annual earnings, since many wage earners are not continuously employed. For reasons stated in Chapter I, the statistics for capital in this and other tables are much less reliable and significant than those for other items (see p. 21).

The table above shows that the manufacturing industries of the United States as a whole experienced a more rapid growth during the five-year period 1904-1909 than during the period 1899-1904, although in both periods the progress was very marked. During the first five years of the decade the average number of wage earners increased 16 per cent; during the second five years, 21 per cent. The value of products increased 29.7 per cent during the first period and 39.7 per cent during the second period, but the rate of increase in the value added to materials by manufacture shows less difference between the two periods, being 30.3 per cent during the first five years and 35.5 per cent during the second five years.

During the 10 years from 1899 to 1909 the number of establishments increased 29.4 per cent; the average number of wage earners, 40.4 per cent; the value of products, 81.2 per cent; and the value added by

manufacture, 76.5 per cent. The gross value of products in 1909 exceeded that in 1899 by more than \$9,000,000,000, and the value added by manufacture in 1909 was, in round numbers, \$3,700,000,000 more than in 1899.

It would be improper to infer that manufactures increased in volume during either of the five-year periods covered by the table to the full extent indicated by the increase in the cost of the materials used or in the value of products or value added by manufacture, since the increase shown in these items is certainly due in part to the increase that has taken place in the prices of commodities. It may be presumed, however, that the quantity of products increased somewhat more rapidly than the number of wage earners, for not only were many of the processes of manufacture improved during the decade, but the figures show that the primary power employed in manufacturing increased much faster than the number of wage earners, indicating that the wage earner had more assistance from mechanical power in 1909 than in 1899.

It is a matter of interest to note that for both of the five-year periods the wages paid show a higher percentage of increase than the average number of wage earners, thus indicating an increase in the average wages.

Comparison with earlier censuses.—In 1810 the Secretary of the Treasury made a report on the condition of manufactures in the United States and estimated that the value of products for 1809 exceeded \$120,000,000. An estimate based on the returns of the census of 1810 placed the value of products for the year covered by the returns at \$198,613,471. Further efforts to secure statistics of manufactures

were made in 1820 and 1840, but the results were more or less unsatisfactory. In 1830 no such attempt was made. The census of 1850 was the first to present fairly complete statistics for manufactures. Each census from that time to 1890 was based in part on returns for the preceding calendar year and in part on returns for other 12-month periods, mainly ending during the census year itself. The last three censuses have been based principally upon returns for the preceding calendar year or for some 12-month period ending within that year. In general, in this report the statistics for all censuses are referred to as of the year preceding that in which the census was taken.

The statistics of manufactures secured at the decennial censuses from 1849 to 1899, inclusive, covered the neighborhood, hand, and building industries, as well as the factory industries, while the reports for 1904 and 1909 were confined to factory industries. The statistics for 1899, although the canvass

was made on the broader basis, have, for the purpose of comparison with later censuses, been reduced to the factory basis by eliminating, as far as possible, the neighborhood, hand, and building industries, but no such elimination is possible with respect to the earlier censuses. For this reason the statistics for years prior to 1899 are not entirely comparable with those for 1904 and 1909. Nevertheless, for the purpose of showing in a rough way the movement during each decade since 1849, Table 3 is presented. Two sets of figures are given in this table for 1899, the one including the neighborhood, hand, and building trades in order to make the data comparable with those for preceding censuses, and the other excluding them in order to make the figures comparable with those for later censuses. The values and wages for 1869 have been reduced to a gold basis, inasmuch as the figures as reported would, because of the inflation of the currency at that time, exaggerate the increase from 1859 to 1869 and understate the increase from 1869 to 1879.

Table 3	Number of establishments.	Capital.	Wage earners (average number).	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
Factories and hand and neighborhood industries:							
1849 (census of 1850).....	123,025	\$533,245,351	957,059	\$236,755,464	\$555,123,882	\$1,019,106,616	\$463,982,734
1859 (census of 1860).....	140,433	\$1,009,855,715	1,311,246	\$378,878,966	\$1,031,605,092	\$1,885,861,676	\$854,256,584
Per cent of increase, 1849 to 1859.....	14.1	89.4	37.0	60.0	55.8	85.0	84.1
1869 (census of 1870) (gold value).....	252,148	\$1,694,567,015	2,053,996	\$620,467,474	\$1,990,741,794	\$3,385,860,354	\$1,395,118,560
Per cent of increase, 1859 to 1869.....	79.6	67.8	56.6	63.8	93.0	79.5	63.3
1879 (census of 1880).....	253,852	\$2,790,272,606	2,732,595	\$947,953,795	\$3,396,823,549	\$5,369,579,191	\$1,972,755,642
Per cent of increase, 1869 to 1879.....	0.7	64.7	33.0	52.8	70.6	58.6	41.4
1889 (census of 1890).....	355,405	\$6,525,050,759	4,251,535	\$1,891,219,696	\$5,162,013,878	\$9,372,378,543	\$4,210,364,965
Per cent of increase, 1879 to 1889.....	40.0	133.8	55.6	99.5	52.0	74.5	113.4
1899 (census of 1900).....	512,191	\$9,813,834,390	5,306,143	\$2,320,933,188	\$7,343,627,875	\$13,000,149,159	\$5,656,521,234
Per cent of increase, 1889 to 1899.....	44.1	50.4	24.8	22.7	42.3	38.7	34.3
Factories, excluding hand and neighborhood industries:							
1899 (census of 1900).....	207,514	\$8,975,256,496	4,712,763	\$2,008,361,119	\$6,575,851,491	\$11,406,926,701	\$4,831,075,210
1904 (census of 1905).....	216,180	\$12,675,580,874	5,468,883	\$2,610,444,953	\$8,500,207,810	\$14,793,902,563	\$6,293,694,753
Per cent of increase, 1899 to 1904.....	4.2	41.2	16.0	30.0	29.3	29.7	30.3
1909 (census of 1910).....	268,491	\$18,423,269,706	6,615,046	\$3,427,037,884	\$12,142,790,878	\$20,672,051,870	\$8,529,260,992
Per cent of increase, 1904 to 1909.....	24.2	45.4	21.0	31.3	42.9	39.7	35.5
Per cent of increase, 1899 to 1909.....	29.4	105.3	40.4	70.6	84.7	81.2	76.5

This table shows that, although the returns for 1849 included neighborhood, hand, and building industries and those for 1909 did not, nevertheless the value of products was over 20 times as great in the latter year as in the former and the number of wage earners employed nearly seven times as great.

As judged by the increase in the number of wage earners, the decade showing the most rapid growth was that from 1859 to 1869, during which the average number of wage earners increased 56.6 per cent. The decade 1879-1889 also showed an exceptionally high percentage of increase in this respect, while the next largest percentage of increase was that for the decade from 1899 to 1909. The method of calculating the average number of wage earners for 1899 and subsequent censuses was different from that used for 1889 (see Chapter I); otherwise a somewhat greater increase would be shown in the table for the period 1889-1899. As respects value of products, the percentage of increase during the last decade exceeded that in any other except the decade from 1849 to

1859; but in value added by manufacture, which, as explained later, is more closely comparable from census to census than total value of products, the percentage of increase during the past 10 years falls below that from 1879 to 1889, as well as that from 1849 to 1859.

The absolute increases in the various items covered by the table during the decade from 1899 to 1909 were much greater than those during any other decade; the increase in value of products, in fact, was almost equal to the total value of all manufactured products in 1889.

In all comparisons between censuses as to the total value of manufactured products, aside from other limitations as to comparability already referred to, allowance must be made for possible changes in the relative amount of duplication involved by reason of the use of the products of one manufacturing establishment as materials for other establishments. It is impossible from any analysis of the returns to determine whether, in the aggregate, such duplication is

relatively greater or less at one census than at another, and general observation of industrial tendencies fails to furnish any basis for conclusions even of an approximate character. This is due to the fact that there are two opposing tendencies present at the same time. On the one hand there is in many cases a tendency toward integration, a single large establishment now performing a series of processes or making a group of related products which were formerly performed or made by separate establishments. This tendency has the effect of reducing the amount of duplication in the figures reported for value of products. On the other hand, in some other cases there is a tendency toward increased specialization, which has the opposite effect. Whether the net effect of these tendencies has been greater or less duplication in the value of products shown for the manufacturing industries as a whole no one can say with any certainty; and much less is it possible to estimate the magnitude of the change.

Governmental manufacturing establishments.—Although the statistics for establishments operated by the Federal Government are not included in the general tables of this report nor in the totals for manufacturing industries, reports were secured from these establishments for 1909, and the most important of the statistics thus secured are presented in the following table:

INDUSTRY.	Number of establishments.	Wage earners (average number).	Wages.	Cost of materials.	Value of products.	Primary horsepower.
All industries	40	32,519	\$28,215,976	\$21,752,072	\$55,919,143	47,787
Clothing, men's, including shirts	5	1,085	536,262	1,834,290	2,643,157	311
Firearms and ammunition	4	3,623	2,449,802	3,788,188	6,661,343	4,411
Ordinance and accessories	3	5,024	4,530,622	3,602,804	8,598,032	5,251
Printing and publishing	8	7,647	7,638,689	2,296,513	10,895,364	3,884
Shipbuilding	12	14,540	12,670,524	9,520,109	25,872,033	32,525
All other industries ¹	8	600	390,077	654,178	1,249,214	1,405

¹ Includes the following industries, with number of establishments as indicated: Bags, other than paper, 1; cement, 1; explosives, 2; foundry and machine-shop products, 2; gas, illuminating and heating, 1; and instruments, professional and scientific, 1.

Laundries.—Steam laundries are not generally considered as manufacturing establishments, and for this reason they have not been canvassed at prior censuses. Since the industry has, however, developed so rapidly, large amounts of capital now being invested and many wage earners being employed, it seemed desirable that it should be covered by the census. The establishments are conducted according to factory methods, and therefore the statistics are associated with those for manufacturing industries. They are not included in the general tables nor in the totals for manufacturing industries, but are shown separately in a special report included in Volume X. For ready reference the totals are presented in Table 5. The figures cover all establishments using mechanical power of any kind.

Table 5

	Number or amount.
Number of establishments	5,180
Persons engaged in the industry	124,214
Proprietors and firm members	5,500
Salaries employees	9,170
Wage earners (average number)	109,484
Actual number of wage earners employed on Dec. 15, 1909, or nearest representative day	112,064
Men 16 years of age and over	31,947
Women 16 years of age and over	79,152
Children under 16 years of age—	
Male	274
Female	692
Primary horsepower	123,477
Capital	\$68,935,226
Expenses	85,187,604
Services	53,007,747
Salaries	8,180,769
Wages	44,826,978
Materials	17,696,360
Miscellaneous	14,483,497
Amount received for work done	104,680,086

Custom sawmills and gristmills.—Statistics for custom sawmills and gristmills which do no merchant business are not included in the general tables nor in the totals for manufacturing industries, but the totals for such mills are given in Table 6. The cost of materials and value of products for gristmills include an estimate for the grain ground, but it was impossible to estimate the value of the lumber sawed in the custom sawmills.

Table 6

	Custom sawmills.	Custom gristmills.
Number of establishments	4,133	11,961
Persons engaged in the industry	12,836	22,795
Proprietors and firm members	5,702	15,634
Salaries employees	44	147
Wage earners (average number)	7,090	7,014
Primary horsepower	93,280	272,763
Capital	\$5,655,145	\$21,258,510
Expenses	2,160,271	48,110,565
Services	1,696,182	1,186,540
Salaries	8,900	47,828
Wages	1,057,252	1,138,712
Materials	97,574	146,314,868
Miscellaneous	306,545	609,157
Value of products	4,515,881	\$5,115,553

¹ Includes estimated value of all grain ground.

² Includes estimated value of products from all grain ground. In addition custom ground products, valued at \$1,170,751, were made by establishments not engaged primarily in the flour and grist-mill industry.

Exports and imports of manufactured products.—It would be desirable, if practicable, to make a close comparison between the quantity and value of the products of each individual industry carried on in the United States and the quantity and value of the corresponding products exported and imported, respectively. Unfortunately, direct and exact comparisons of this character are impossible for most industries or classes of products, as it is impracticable to classify and subdivide the manufacturing industries in such a way that their products will correspond exactly to the classifications which are employed for exports and imports. In the case of certain selected industries or of certain specific products of other industries, however, such comparisons can be made with approximate correctness, and in such cases statistics are presented in Volume X of the census reports, which contain special reports on selected industries. On account

the complexity of the subject, no such statistics dealing with particular industries or products are shown in the present volume, which is in the nature of a general report.

It is worth while, however, to make such comparison as is practicable between the total value of the products of all factory industries combined and the value of exports and imports of manufactured articles. Table 7 shows, for each census year since 1879, the value of such manufactured products, and shows also the value of the exports and imports of manufactured products for the fiscal year (ending June 30) next following each census year. While the statistics of manufactures and of exports and imports relate to different periods of time, those for manufactures are on the whole fairly comparable with those for exports, as in many cases products manufactured at a given time are not exported until several months later.

Inasmuch as the products of the neighborhood, hand, and building industries are not ordinarily the subject of exportation or importation, the value of such products, as reported at the earlier censuses, has been deducted, so far as practicable, from the total value of manufactured products for the United States. As previously explained, establishments of this character were not canvassed in 1909 or 1904, and for 1899 they have been eliminated from the totals, as originally published, by a careful process, consisting in the omission of certain entire industries, and also of such establishments in other industries as did not conform to the new census definition of manufactures under the factory system. For 1889 and 1879, however, it has not been deemed practicable to make such a complete elimination of nonfactory establishments, but the totals for all industries which are primarily or wholly in the nature of hand, building, or neighborhood industries have been deducted, so that the data are approximately comparable.

In comparing the figures here presented for the value of manufactured products and the value of exports and imports, it should be borne in mind that there is a very great duplication in the census statistics of the gross value of manufactured products. Large quantities of partly manufactured articles which are included among the products of certain factories are used as materials by other factories and thus their value is again included in the value of products for the latter group. Obviously no such duplication exists in the statistics of exports and imports. Could the duplication in the census statistics be eliminated, it would be found that the value both of exports and of imports bore a materially higher ratio to the value of domestic manufactures than that shown in the table. There are other minor elements of incomparability between the statistics of exports or of imports, on the one hand, and those of domestic manufactures, on the other, and, in fact, some elements of incomparability between the statistics of exports and those of imports, but these are so much less important in their effect upon the comparison than the great duplication in the value of products reported for manufacturing industries that they do not merit special discussion.

According to the table the value of exports of domestic manufactures in the year ending June 30, 1910, was equal to 5 per cent of the gross value of manufactured products in the United States in 1909, and that of imports to 4 per cent. The value of exports bore a smaller ratio to the total value of manufactured products in that year than in any other census year covered by the table except 1889, and the value of imports shows a smaller ratio for that year than for any other except 1904. The highest ratio for exports (7 per cent) is shown for 1899.

In considering the changes from census to census in the ratios between the value of exports and of imports and that of domestic manufactures, it should be borne in mind that there may have been some variation, as noted above, in the relative amount of duplication in the value of manufactured products reported by the census. Such variations, however, could not explain in full the considerable decrease in the ratio of the value of exports to the value of products of factory industries between 1899 and 1909. Another possible factor which might affect this ratio would be a difference in price movement as between those articles which are chiefly manufactured for home consumption and those manufactured for export. If the former have advanced in price relatively more than the latter, that fact would help to explain a decline in the ratio of the value of exports of manufactures to the total value of products of manufacturing industries.

A proper understanding of the changes in the ratio between the value of exports and imports of manufactures and the total value of products manufactured in the country requires a consideration of the various

	VALUE OF MANUFACTURED PRODUCTS.			RATIO OF VALUE OF EXPORTS AND IMPORTS TO VALUE OF DOMESTIC PRODUCTION (PER CENT).	
	Domestic production.	Domestic exports. ¹	Imports. ¹	Exports.	Imports.
Census year:					
1909.....	\$20,672,051,870	\$1,026,240,899	\$834,428,312	5.0	4.0
1904.....	14,793,902,563	894,490,254	575,556,449	6.0	3.9
1899.....	11,406,926,701	802,972,777	470,375,760	7.0	4.1
1889.....	* 8,309,722,605	403,738,622	490,941,692	4.9	5.8
1879.....	* 5,053,921,922	315,171,021	425,492,137	6.2	8.4
Per cent of increase: ²					
1899-1909.....	81.2	27.8	77.4	.....	.....
1904-1909.....	39.7	14.7	45.0	.....	.....
1899-1904.....	29.7	11.4	22.4	.....	.....
1889-1899.....	37.3	98.9	-2.2	.....	.....
1879-1889.....	63.1	28.1	13.0	.....	.....

¹ Figures relate to the fiscal year ending June 30 next succeeding the census year.
² Exclusive of all industries which are primarily or wholly of the nature of hand, building, or neighborhood industries.
³ A minus sign (-) denotes decrease.

MANUFACTURES.

classes of manufactured products exported and imported. The Bureau of Foreign and Domestic Commerce divides such exports and imports into three main classes: (1) Food stuffs wholly or partly manufactured; (2) manufactures for further use in manufacturing, that is, partly finished products; and (3) manufactures (other than foodstuffs) ready for consumption. The

following table shows, for the fiscal years corresponding most nearly to the last five census years, the value of exports and imports of each of these classes and the proportion which the value reported for each class formed of the value of all exports or imports, both of manufactured and of unmanufactured articles, the value of all being also shown for convenience.

	All exports and imports (value.)	MANUFACTURED PRODUCTS EXPORTED OR IMPORTED (VALUE).									
		Total.		Foodstuffs partly or wholly manufactured.		Manufactures other than foodstuffs.					
		Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.	Total.		For further use in manufacturing.		Ready for consumption.	
						Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.	Amount.	Per cent of all exports or imports.
Domestic exports, year ending June 30—											
1910.....	\$1,710,083,998	\$1,026,240,899	60.0	\$259,259,654	15.2	\$766,981,245	44.9	\$267,765,916	15.7	\$499,215,329	29.2
1905.....	1,491,744,041	894,490,254	60.0	283,054,680	19.0	611,425,574	41.0	279,391,544	14.0	402,034,030	27.0
1900.....	1,370,763,571	802,972,777	58.6	318,126,502	23.2	484,846,275	35.4	152,890,591	11.2	331,955,684	24.2
1890.....	845,293,828	403,738,622	47.8	224,756,580	26.6	178,982,042	21.2	46,454,922	5.5	132,527,060	15.7
1880.....	823,946,353	315,171,021	38.3	193,352,723	23.5	121,818,298	14.8	29,044,159	3.5	92,774,139	11.3
Imports, year ending June 30—											
1910.....	1,556,947,430	834,428,312	53.6	181,566,572	11.7	652,861,740	41.9	285,138,373	18.3	367,723,367	23.6
1905.....	1,117,513,071	575,556,449	51.5	145,355,839	13.0	430,200,610	38.5	177,827,960	15.9	252,372,650	22.6
1900.....	849,941,184	470,375,760	55.3	133,027,374	15.7	337,348,386	39.7	134,222,045	15.8	203,126,341	23.9
1890.....	789,310,409	480,941,692	60.9	133,332,031	16.9	347,609,661	44.0	116,924,090	14.8	230,685,571	29.2
1880.....	667,954,746	425,492,137	63.7	118,125,216	17.7	307,366,921	46.0	110,779,516	16.6	196,587,405	29.4

The conspicuous feature of this table is the decline in the relative importance of the exports of foodstuffs partly or wholly manufactured. Exports of this character constituted 23.5 per cent in value of the total exports from the United States in the fiscal year 1880, as compared with 15.2 per cent in the fiscal year 1910. Despite the increase in prices, the value of the exports of manufactured or partly manufactured foodstuffs in 1910 was actually less than in 1900, and only about one-third greater than in 1880. The exportation of foodstuffs, however, is dependent primarily upon agricultural production, rather than upon manufacturing. The exportation of manufactures intended for further

use in manufacturing and that of manufactures, other than foodstuffs, ready for consumption, show quite a different movement from that of foodstuffs. The value of exports of both of these classes increased more rapidly between 1879-80 and 1909-10 than the total value of the manufactured products of the country, although during the last decade of this period, the exportation of manufactures ready for consumption increased less rapidly than the total value of domestic manufactures. It may be noted, however, that the value of exports of manufactures ready for consumption in the fiscal year 1911 was nearly one hundred millions greater than in 1910.

not made in steel works or rolling mills," "sewing machines, cases, and attachments," and "smelting and refining, not from the ore." The total value of wire and wire products for all establishments which drew wire amounted in 1909 to \$180,083,522, or more than twice the value of products of the establishments classified as engaged in the wire industry. On the other hand, it should be noted that the \$84,486,518 reported as the value of products for the wire industry does not represent the value of wire alone, but includes a large amount representing the value of manufactures of wire, such as wire fence, wire cloth, and wire rope and cable—products similar to those manufactured by establishments classified under the designation "wire-work, including wire rope and cable."

This example represents one of the most extreme cases of the overlapping of the industries distinguished by the Bureau of the Census, but there are many other cases where the overlapping is very considerable. The statistics shown for many of the census classifications can not be accepted either as constituting a complete presentation for the branch of industry indicated by the given designation, or as relating solely to the operations of that branch of industry. There are, however, many industries which do not particularly lend themselves to association with other industries in a single establishment, so that the statistics shown for them are fairly representative of the branches of industry covered by the respective designations.

In an effort to reduce, as far as possible, the amount of overlapping between industries, a number of the classifications which were shown separately at prior censuses have been combined at the present census, at least in the greater number of the tables. The total number of industries distinguished in the general tables has thus been reduced from 339 in 1904 to 264 in 1909. For example, the statistics for the foundry and machine-shop industry for 1909 cover those branches of industry which were shown separately at the census of 1904 under the designations "bells;" "gas machines and gas and water meters;" "hardware;" "hardware, saddlery;" "iron and steel pipe, cast;" "plumbers' supplies;" "steam fittings and heating apparatus;" and "structural ironwork." Even after this combination is made, however, there is no sharp distinction between the foundry and machine-shop industry and some of the other industries which are still shown separately in the census tables.

The Census Bureau has aimed, so far as practicable with a reasonable expenditure of money and of time, to remedy the statistical difficulties due to the overlapping of industries. It has sought to ascertain in the case of the more important industries the quantity and value—or, where quantities would have no significance, the value alone—of each separate class of

products. While it is often impracticable for an establishment to assign the proper proportions of its capital, wage earners, and expenses to the different branches of industry carried on within it, most establishments are able to distinguish exactly or approximately the quantity and value of the different classes of products made. In the case of many industries, special schedules calling for detailed information in regard to products were used, and often several different special schedules were filled out by a single establishment whose business was of a varied character. The general manufactures schedule, which was used in canvassing all establishments, also contained spaces for listing the value of the leading products separately, though in a good many instances it was found impracticable to secure a proper classification of the products of a given establishment. The data thus collected have been assembled, and in connection with the statistics for the establishments assigned to a given industry, the quantities and values of similar products made by establishments assigned to other industries are shown wherever practicable. Such supplemental information regarding the quantities and values of products is presented in Chapter XV of this volume, but is shown in greater detail in Volume X of the census reports, which consists of special reports on individual industries.

It should, however, be constantly borne in mind that in all the tables in the census reports, except where expressly stated to the contrary, the statistics presented for a given industry represent simply the sum of the figures for the establishments whose principal products were those indicated by the industry designation.

Comparisons with previous censuses.—The statistics for different censuses with respect to individual industries are not in all cases strictly comparable. From what has been said regarding the overlapping of industries, it is obvious that the character and the degree of such overlapping may differ from census to census, not only because of changes in the character of the business of a few individual concerns, but in some cases because of general industrial changes. The establishments assigned to a given industry may cover the manufacture of the products indicated by the industry designation more completely, or less completely, at one census than at another, while conversely subsidiary products may form a larger, or a smaller, proportion of the output of the establishment assigned to a given industry at one time than at another. Broadly speaking, the tendency toward the integration of industry in recent years has probably increased the relative amount of overlapping in the census statistics of industries.

It often happens that after it has been classified in a certain way at one census an individual establishment makes such changes in the character of its products as

to necessitate its assignment to a different industry at the succeeding census. Of course, if the establishment wholly changes the nature of its business its assignment to one industry at one census and to another at the next gives strictly accurate statistical results, but if there has been merely a shift from the preponderance of one branch of business to the preponderance of another branch, the change in the assignment of the establishment as a whole tends to vitiate the comparisons. There are some industries which, by their nature, involve little overlapping and in which the returns from census to census are closely comparable. In such industries, however, as the manufacture of machinery and other highly elaborated products of iron and steel, where the same metal-working machine tools can often be used to produce a variety of products, radical changes in the nature of the output of a single establishment not infrequently occur.

It is natural that, with the progress of invention and with changes in the methods of conducting business, new industries should from time to time come into existence and that others should either disappear or become so blended with more important branches of manufacture that it is no longer worth while to present separate statistics for them. For example, statistics of the manufacture of moving-picture films and apparatus were first shown at the census of 1909. On the other hand, the manufacture of paper collars and cuffs was in 1879 an industry of considerable importance, but the business has so decreased from census to census that, in 1909, the few remaining establishments were classed with those manufacturing men's furnishing goods. Similarly, the statistics for forges and bloomeries, which formerly constituted an industry of considerable importance, and which were shown separately at earlier censuses, have now been merged with those for steel works and rolling mills.

Finally, it should be borne in mind in comparing the progress of individual industries from census to census that no one standard of measurement can afford a fair basis for all such comparisons. One industry, for example, may show a much greater percentage of increase in total value of products than another, and yet this may be due merely to the fact that the prices of the products of the former have increased more rapidly, or decreased less rapidly, than those of the latter. In fact, the higher rate of increase in the gross value of products of the one industry as compared with the other may be wholly due to a more rapid increase in the price of raw materials, and a comparison based on value added by manufacture may show quite a different relative movement. Even the changes in the value added by manufacture, however, are affected by changes in prices and in rates of wages, as well as by changes in quantity of output; and yet again a com-

parison between two industries as to changes in the number of wage earners alone may furnish no precise indication of relative progress, since labor-saving devices may have been introduced more extensively in the one industry than in the other.

Selection of industries for special presentation.—All the more important results of the census of manufactures, covering a very considerable number of items, are shown in this report for 259 of the 264 industries distinguished by the Bureau of the Census; for the other 5 industries, which are those included under the designations "millstones," "ordnance and accessories," "pulp, from fiber other than wood," "straw goods, not elsewhere specified," and "whale-bone cutting," separate statistics can not be presented, as to do so would reveal the operations of individual concerns. Considerations of space and of convenience to the reader, however, make it necessary to confine some of the more detailed analyses, such as those classifying establishments according to the character of ownership or according to size, to selected industries. In some of the condensed summary tables and text discussions also a selection of industries is necessary. In most cases where tables are confined to selected industries they relate to the 86 industries which in 1909 gave employment to more than 10,000 wage earners each. The number of wage earners was considered, on the whole, the most satisfactory basis for selection, as best indicating the relative importance of industries. Some industries, however, which employ fewer than 10,000 wage earners have a decidedly greater value of products than some which employ more than that number. There is usually a closer relation between the number of wage earners and the value added by manufacture, but in some cases industries employing fewer than 10,000 wage earners have a somewhat greater value added by manufacture than certain industries employing more than that number.

Description of general tables.—At the end of this volume are presented several extended tables giving details regarding all individual industries or regarding the more important industries. Table I gives the more important items from the manufactures schedule for 1909, 1904, and 1899 for each of the 259 industries distinguished at the present census for which separate statistics can be presented. Table II gives statistics in greater detail for each industry for 1909. Table V shows the principal items for each of the 86 industries giving employment in 1909 to 10,000 or more wage earners, for 1909, 1904, and 1899, for each state in which the industry is conducted, so far as such data can be given without disclosing the operations of individual establishments. Table VI gives more detailed statistics for 1909 for each industry, by states.

SUMMARY FOR INDIVIDUAL INDUSTRIES.

Principal statistical items for each industry.—The following summary table shows, for each of the 259 industries for which separate statistics can be presented, the number of establishments, the average number of wage earners, the value of products, and the value added by manufacture, as returned at the census of 1909, and also the percentage of increase in

each of these items except the number of establishments from 1899 to 1909, from 1904 to 1909, and from 1899 to 1904, respectively. In some cases the percentages of increase are omitted because the statistics for the different years are not comparable. The industries are arranged in the order of their value of products and are grouped in classes made upon this basis.

SUMMARY OF STATISTICS, BY INDUSTRIES.

NOTE.—The percentages in this table are based on the figures in General Table I. In some cases the percentages of increase have been omitted, because the figures for the different censuses are not strictly comparable, or because figures for one of the earlier censuses are not available. The reasons for lack of comparability in each case are given in full in the discussion of the industry concerned in Chapter XV.

INDUSTRY.	CENSUS OF 1909.				PER CENT OF INCREASE. ¹								
	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number).			Value of products.			Value added by manufacture.		
					1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
All industries.....	268,491	6,615,046	\$20,672,051,870	\$8,529,260,992	40.4	21.0	16.0	81.2	39.7	29.7	76.5	35.5	30.3
INDUSTRIES WITH PRODUCTS VALUED AT \$500,000,000 OR OVER.													
Slaughtering and meat packing.....	1,641	89,728	1,370,568,101	167,740,317	29.5	19.0	8.9	73.8	45.6	17.0	62.8	51.6	7.5
Foundry and machine-shop products.....	13,253	531,011	1,228,475,148	688,404,009	19.8	19.8	4.7	39.5	30.7	16.2	68.6	34.2	32.3
Lumber and timber products.....	40,671	695,019	1,156,128,747	648,011,168	36.6	30.5	4.7	51.9	30.7	16.2	68.6	34.2	32.3
Iron and steel, steel works and rolling mills.....	446	240,076	985,722,534	328,221,678	31.0	15.7	13.3	65.1	46.3	12.9	59.1	41.0	12.8
Flour-mill and gristmill products.....	11,691	39,453	274,557,187	116,007,926	22.4	0.9	21.4	76.2	23.9	42.2	58.3	24.7	27.0
Printing and publishing.....	31,445	258,434	737,876,087	536,101,497	32.4	18.0	12.2	86.7	33.6	39.8	83.9	30.8	40.6
Cotton goods, including cotton small wares.....	1,324	378,880	628,391,813	257,382,343	25.1	19.9	4.3	85.3	39.5	32.8	58.2	56.7	1.0
Clothing, men's, including shirts.....	6,354	239,696	568,076,635	270,561,189	52.1	38.0	10.2	75.4	39.7	25.6	77.8	38.5	25.1
Boots and shoes, including cut stock and findings.....	1,918	198,297	512,797,642	180,059,429	31.1	23.7	6.0	76.8	43.4	23.3	82.6	36.0	34.1
INDUSTRIES WITH PRODUCTS VALUED AT \$100,000,000 BUT LESS THAN \$500,000,000.													
Woolen, worsted, and felt goods, and wool hats.....	985	168,722	435,978,558	153,100,519	29.1	15.0	12.3	75.2	36.5	28.4	61.4	33.4	20.9
Tobacco manufactures.....	15,822	166,810	416,695,104	239,599,483	23.9	4.6	20.3	58.0	25.8	25.6	40.2	16.8	20.0
Cars and general shop construction and repairs by steam-railroad companies.....	1,145	282,174	405,600,727	206,187,315	62.5	19.1	36.4	86.0	30.9	42.0	89.8	29.9	46.0
Bread and other bakery products.....	23,926	100,216	396,864,844	158,831,181	66.5	23.3	35.0	126.3	47.2	53.7	87.8	39.8	41.4
Iron and steel, blast furnaces.....	208	38,429	391,429,283	70,791,394	-2.1	9.6	-10.6	69.3	68.8	12.1	-5.9	33.9	-29.7
Clothing, women's.....	4,558	153,743	384,751,649	175,963,423	83.6	32.9	38.2	141.5	55.4	55.4	135.8	50.5	56.7
Smelting and refining, copper.....	38	15,628	378,805,974	45,274,336	38.0	22.6	12.6	129.4	57.3	45.8	5.4	2.8	2.6
Liquors, malt.....	1,414	54,879	374,730,096	278,134,460	38.3	13.4	22.0	58.2	25.6	25.9	50.1	24.5	20.6
Leather, tanned, curried, and finished.....	919	62,202	327,874,187	79,595,254	19.4	8.7	9.8	60.7	29.8	23.8	62.3	29.5	25.3
Butter, cheese, and condensed milk.....	8,479	18,431	274,557,187	39,011,654	44.0	18.5	21.5	109.9	63.2	28.6	77.8	54.4	15.1
Paper and wood pulp.....	777	75,978	267,656,964	102,214,623	53.0	15.2	32.9	110.2	41.8	48.2	80.0	32.0	36.4
Automobiles, including bodies and parts.....	743	75,721	249,202,075	117,556,339	3,278.9	528.4	437.7	5,148.6	729.7	532.6	3,893.1	596.3	473.9
Sugar, refining, not including beet sugar.....	19	9,399	248,328,659	22,340,699	14.2	-16.9	37.5	83.6	34.9	36.1	79.0	29.9	37.8
Furniture and refrigerators.....	3,155	128,452	239,886,506	131,111,664	41.8	12.5	26.0	83.6	34.9	36.1	79.0	29.9	37.8
Petroleum, refining.....	147	13,929	236,997,659	37,724,257	14.2	-16.9	37.5	91.2	35.4	41.2	79.0	5.9	69.0
Electrical machinery, apparatus, and supplies.....	1,009	87,256	221,308,563	112,742,159	107.7	44.3	43.9	139.4	57.2	52.3	162.3	52.4	72.1
Liquors, distilled.....	613	6,430	204,639,412	168,722,519	72.8	20.1	44.0	111.5	55.9	35.6	106.6	59.7	29.4
Hosiery and knit goods.....	1,374	129,275	200,143,527	89,902,474	54.5	24.2	24.4	108.8	46.0	43.0	101.4	49.1	35.1
Copper, tin, and sheet-iron products.....	4,228	73,615	199,824,218	87,241,945	38.4	24.4	21.7	53.6	47.7	24.3	98.8	55.2	28.0
Silk and silk goods, including throwsters.....	552	99,037	196,911,667	89,144,751	51.4	24.4	21.7	53.6	47.7	24.3	98.8	55.2	28.0
Smelting and refining, lead.....	28	7,424	167,405,650	15,442,628	-10.8	-2.0	-9.0	-4.6	-9.9	5.9	-50.6	-8.5	-46.1
Gas, illuminating and heating.....	1,296	37,215	166,814,371	114,386,527	65.7	21.8	36.1	120.3	33.3	65.3	107.6	30.0	59.6
Carriages and wagons and materials.....	5,492	69,928	159,892,547	77,941,259	-5.3	-10.2	5.5	15.6	2.6	12.7	9.0	-0.5	9.0
Canning and preserving.....	3,767	59,968	157,101,201	55,278,142	5.2	5.3	-0.1	58.2	20.4	31.3	55.0	16.8	32.7
Brass and bronze products.....	1,021	40,618	149,989,058	50,760,646	49.5	22.5	22.1	69.2	46.5	15.5	84.8	38.1	33.8
Oil, cottonseed, and cake.....	817	17,071	147,867,894	28,034,419	55.1	9.9	41.2	151.8	53.4	64.2	106.7	71.2	20.8
Agricultural implements.....	640	50,551	146,329,268	86,022,749	8.5	6.7	1.7	44.6	30.6	10.7	50.2	35.0	11.8
Patent medicines and compounds and druggists' preparations.....	3,642	22,895	141,941,602	91,565,937	20.3	11.8	7.6	59.9	20.9	32.3	61.1	17.5	37.1
Confectionery.....	1,944	44,638	134,795,913	53,645,140	66.2	23.2	34.9	122.3	54.8	43.6	112.1	40.1	51.4
Rubber goods, not elsewhere specified.....	227	26,521	128,435,747	46,243,926	3.8	.....	.....	.....	.....	19.7	.....	.....	25.8
Food preparations.....	1,213	14,968	125,331,181	41,389,032	.....	.....	.....	.....	.....	.....	.....	.....	56.1
Paint and varnish.....	791	14,240	124,589,422	45,873,867	46.8	22.4	20.0	79.5	37.5	30.6	84.8	47.9	24.9
Cars, steam-railroad, not including operations of railroad companies.....	110	43,056	123,729,627	44,976,766	28.8	26.5	1.8	36.7	11.3	22.8	56.3	26.6	23.6
Chemicals.....	349	23,714	117,688,857	53,567,351	.....	.....	.....	.....	.....	.....	.....	.....	01.5
Marble and stone work.....	4,964	65,603	113,092,967	75,695,833	.....	.....	.....	.....	.....	.....	.....	.....	29.9
Soap.....	420	12,999	111,357,777	39,178,359	.....	.....	.....	.....	.....	.....	.....	.....	58.9
Coffee and spice, roasting and grinding.....	607	7,490	110,532,787	27,327,689	.....	.....	.....	.....	.....	.....	.....	.....	49.0
Leather goods.....	2,375	34,907	104,719,008	44,692,240	19.2	2.1	16.8	73.3	27.5	35.9	64.2	18.6	38.1
Fertilizers.....	560	18,310	103,960,213	34,438,293	58.1	29.1	22.5	132.8	83.9	26.6	119.4	99.6	9.1

¹ A minus sign (-) denotes decrease.

SUMMARY, BY INDUSTRIES.

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SUMMARY OF STATISTICS, BY INDUSTRIES—Continued.

[See note at head of this table.]

Table 1—Continued.

INDUSTRY.	CENSUS OF 1909.				PER CENT OF INCREASE. ¹								
	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number).			Value of products.			Value added by manufacture.		
					1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
INDUSTRIES WITH PRODUCTS VALUED AT \$25,000,000 BUT LESS THAN \$100,000,000.													
Coke.....	315	29,273	\$95,696,622	\$31,672,095	72.2	54.2	11.7	168.9	55.0	45.4	99.0	45.0	37.2
Brick and tile.....	4,215	76,528	92,776,504	69,040,402	23.5	15.9	6.5	81.0	30.4	38.8	71.5	25.9	36.2
Glass.....	363	68,911	92,095,203	59,975,704	30.5	7.7	21.1	62.9	15.7	40.8	50.7	12.2	34.3
Musical instruments, pianos and organs and materials.....	507	38,020	89,789,544	46,024,807	78.4	14.9	55.2	118.9	35.9	61.1	94.6	20.6	61.1
Furnishing goods, men's.....	900	38,482	87,710,197	38,585,354			-10.3			10.6			8.7
Millinery and lace goods.....	1,579	39,201	85,893,632	40,853,357			63.0			72.3			77.5
Wire.....	56	18,084	84,486,518	23,943,587	1,028.1	281.8	195.5	796.8	122.8	302.4	894.7	265.0	236.2
Dyeing and finishing textiles.....	426	44,046	83,556,432	48,295,131	47.9	23.8	19.4	85.8	64.3	13.1	78.8	54.6	15.6
Jewelry.....	1,537	30,347	80,349,874	43,675,015	48.3	37.4	7.9	74.2	51.0	15.4	82.8	50.3	21.6
Stoves and furnaces, including gas and oil stoves.....	576	37,130	78,853,323	49,515,062			11.2			26.9			24.2
Pottery, terra-cotta, and fire-clay products.....	822	56,168	76,118,861	54,207,956	28.5	7.1	19.9	72.0	15.6	45.0	67.6	13.9	47.2
Shipbuilding, including boat building.....	1,353	40,506	73,360,515	42,145,957	-13.4	-20.2	8.6	-1.6	-11.4	11.1	2.7	-7.0	18.3
Carpets and rugs, other than rag.....	139	33,307	71,188,152	31,625,148	17.2	0.3	16.9	47.7	15.6	27.6	50.9	33.6	12.8
Cement.....	135	26,775	63,205,455	33,861,664			53.2			111.6			7.9
Cordage and twine and jute and linen goods.....	164	25,820	54,450,115	20,105,176	19.3	1.9	17.0	24.3	-5.6	31.8	25.5		14.4
Cooperage and wooden goods, not elsewhere specified.....	1,693	26,260	60,248,260	23,320,419	3.7	-5.3	9.6	43.4	4.0	37.9	26.7	1.5	24.7
Fur goods.....	1,241	11,927	55,937,549	24,160,644	53.7	27.3	20.8	116.0	50.7	43.3	108.0	51.8	37.0
Paper goods, not elsewhere specified.....	403	19,211	55,170,504	23,921,645	97.5	30.5	51.4	126.5	62.5	39.4	135.4	62.3	46.7
Bags, other than paper.....	109	7,968	54,881,622	8,517,154	103.2	39.3	45.9	179.3	45.7	50.3	155.1	26.3	104.7
Boxes, fancy and paper.....	949	39,514	54,450,115	28,733,774	42.9	23.2	18.0	99.3	47.7	35.0	64.8	42.4	28.8
Cutlery and tools, not elsewhere specified.....	959	32,996	53,265,757	34,936,556	68.0	20.0	33.3	89.2	36.5	38.0	90.2	35.0	39.0
Boots and shoes, rubber.....	22	17,612	49,720,567	20,143,391	22.4	-7.3	32.0	21.0	-29.0	70.5	9.4	-47.1	104.8
Glucose and starch.....	118	4,773	48,799,311	11,900,540	-19.7	2.0	-21.3	57.8	49.5	5.6	27.3	68.9	-23.7
Beet sugar.....	58	7,204	48,122,383	20,857,213	265.7	81.8	101.2	557.0	97.3	233.1	727.7	119.5	298.1
Tin plate and terneplate.....	31	5,352	47,969,645	6,080,211	45.8	10.4	32.0	50.4	36.0	10.6	17.8	55.6	-24.8
Hats, fur-felt.....	273	26,064	47,864,630	25,755,399	32.8	13.7	16.8	72.1	30.7	31.7	80.1	24.7	44.5
Gas and electric fixtures and lamps and reflectors.....	619	18,861	45,057,372	24,590,015	67.8	50.0	11.9	127.3	69.6	34.0	107.4	54.8	39.6
Mineral and soda waters.....	4,916	13,147	43,508,464	27,042,938	49.6	20.8	23.8	87.0	43.8	30.0	83.9	33.5	37.7
Ice, manufactured.....	2,004	16,114	42,953,055	31,635,567	134.2	59.5	46.8	211.7	80.6	72.6	202.2	77.9	69.6
Silverware and plated ware.....	183	16,610	42,228,547	23,896,440	304.1	11.8	21.8	61.7	28.6	25.8	65.3	39.0	27.2
Wirework, including wire rope and cable.....	611	12,348	41,937,952	17,544,038	35.1	-7.7	46.3	111.4	26.9	66.8	94.4	15.6	68.2
Explosives.....	86	6,274	40,139,661	17,828,113	39.4	8.2	28.8	134.4	35.6	72.9	155.2	39.8	82.6
Malt.....	114	1,760	38,252,233	7,787,934	-11.6	-14.3	3.2	97.4	26.3	56.3	79.9	18.8	46.3
Oil, linseed.....	29	1,452	36,738,694	5,704,118	9.3	7.6	1.6	35.1	33.2	1.4	104.6	28.9	58.7
Mattresses and spring beds.....	930	11,322	35,783,154	15,300,646	48.0	8.6	36.3	99.3	28.9	54.6	98.9	33.1	69.5
Clocks and watches, including cases and materials.....	120	23,857	35,196,842	24,066,144	39.1	5.7	31.6	59.2	18.2	34.7	81.1	20.8	49.9
Smelting and refining, zinc.....	29	6,655	34,205,894	8,975,893	36.7	1.9	34.1	88.1	38.0	36.3	83.1	15.6	59.4
Firearms and ammunition.....	66	14,715	34,111,564	17,090,901	51.5	7.9	40.4	54.7	20.9	82.7	75.7	7.7	69.1
Corsets.....	138	17,564	33,257,187	17,616,772	42.8	60.0	-10.8	130.1	123.8	2.8	117.7	101.9	7.8
Cars and general shop construction and repairs by street-railroad companies.....	541	22,418	31,962,561	16,794,662	219.1	102.8	57.3	241.1	137.9	43.4	233.6	110.6	58.4
Locomotives, not made by railroad companies.....	16	14,909	31,682,302	16,522,319		-39.9		-47.0				-48.1	
Iron and steel pipe, wrought.....	28	6,817	30,886,270	7,944,361	23.1	25.9	-2.2	45.1	77.5	-18.3	37.7	70.7	-19.3
Oil, not elsewhere specified.....	189	1,715	30,865,122	9,458,161	17.8	31.4	-10.4	65.8	34.6	23.2	23.8	11.5	11.1
Sugar and molasses.....	214	4,127	30,620,738	9,325,894									32.3
Sewing machines, cases, and attachments.....	47	19,296	28,262,416	16,807,771	118.4	12.7	25.1	33.8	8.1	23.7	44.1	8.8	66.3
Smelting and refining, not from the ore.....	89	2,147	28,072,041	4,909,622									42.4
Turpentine and rosin.....	1,685	39,511	25,295,017	20,384,179	5.6	18.4	-20.3	24.3	5.7	17.7	44.0	1.1	
INDUSTRIES WITH PRODUCTS VALUED AT \$10,000,000 BUT LESS THAN \$25,000,000.													
Belting and hose, woven and rubber.....	46	6,319	24,729,221	10,223,814	212.0	43.9	116.8	259.1	39.0	158.4	333.6	46.0	187.0
Coffins, burial cases, and undertakers' goods.....	284	9,339	24,525,905	12,561,638	36.5	10.3	23.8	75.8	21.0	45.3	79.3	16.7	53.6
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	108	11,345	24,484,907	11,680,572	45.1	40.2	5.6	75.2	66.7	5.1	97.7	69.8	18.5
Artificial flowers and feathers and plumes.....	412	10,016	23,980,567	10,353,163		130.6			357.0		324.0		75.8
Cash registers and calculating machines.....	50	7,465	23,708,326	20,155,600	261.2	83.0	97.3	317.8	149.1	74.0			37.0
Belting and hose, leather.....	139	3,006	23,691,887	8,069,284	80.3	43.7	25.5	123.0	66.6	33.9	158.4	64.6	37.0
Gloves and mittens, leather.....	377	11,354	23,630,568	10,422,597		6.7			33.2			34.7	
Gold and silver, reducing and refining, not from the ore.....	62	456	23,611,764	7,628,055	108.2	58.9	31.0	99.9	26.1	58.5	85.0	37.3	34.8
Grease and tallow.....	353	4,357	23,419,395	7,876,956	113.6	20.1	77.8	95.9	24.6	57.4	146.0	22.2	101.4
Oilcloth and linoleum.....	31	5,201	23,339,022	7,788,921	61.0	33.9	20.2	104.7	57.8	29.7	102.2	64.3	23.1
Buttons.....	444	16,427	22,708,065	13,166,774	89.1	55.5	21.7	195.1	104.0	44.7	169.1	88.4	42.9
Fancy articles, not elsewhere specified.....	494	12,191	22,632,199	12,271,485	44.3	19.5	29.7	75.5	28.6	38.4	78.5	22.0	44.6
Photographic apparatus and materials.....	103	5,195	22,561,341	15,553,709	50.8	36.3	19.7	189.3	73.2	67.0	258.0	78.0	100.4
Chocolate and cocoa products.....	27	2,826	22,390,222	6,867,162	115.1	35.2	59.1	131.6	55.6	48.9	146.2	47.1	67.3
Rice, cleaning and polishing.....	71	1,239	22,371,457	2,870,377	90.3	-17.0	129.2	136.4	37.3	86.8	150.0	-1.3	139.8
Wood, turned and carved.....	1,050	14,139	22,198,572	12,454,876		-3.7	27.1	55.0	10.1	40.9	46.7	7.5	36.6
Hats, straw.....	88	8,814	21,424,253	9,956,055		58.3			106.9			105.4	
Baking powders and yeast.....	144	2,155	20,774,538	11,436,603	11.2	-12.0	26.4	42.6	6.1	30.7	53.7	13.2	35.3
Iron and steel forgings.....	172	8,168	20,293,440	10,053,589	74.2	44.2	20.8	94.4	67.6	16.0	92.4	58.1	21.7
Babbitt metal and solder.....	109	897	19,767,935	3,498,235	67.7	57.6	6.4	115.1	50.9	42.5	193.2	56.4	87.4
Typewriters and supplies.....	89	9,578	19,718,767	15,641,421	120.7	53.7	43.6	184.5	85.3	53.5	182.9	78.4	58.6
Roofing materials.....	117	2,465	19,204,423	6,746,246	-67.5	-72.0	18.1	40.3	-3.4	45.1	-0.9	-25.3	32.7
Artificial stone.....	3,439	9,957	18,595,688	11,552,746	297.3	297.3			330.5			328.2	
Window shades and fixtures.....	219	3,930	18,570,932	5,918,325	118.2	49.8	45.7	130.0	107.9	10.6	137.0	58.3	39.5
House-furnishing goods, not elsewhere specified.....	260	4,907	18,508,586	6,138,078	-5.9	2.7	-5.3	29.6	23.3	5.1	20.8	14.0	6.6

¹ A minus sign (-) denotes decrease.

SUMMARY OF STATISTICS, BY INDUSTRIES—Continued.

[See note at head of this table.]

INDUSTRY.	CENSUS OF 1909.				PER CENT OF INCREASE. ¹								
	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number),			Value of products.			Value added by manufacture.		
					1899-1909	1901-1909	1899-1904	1899-1909	1901-1909	1899-1904	1899-1909	1901-1909	1899-1904
INDUSTRIES WITH PRODUCTS VALUED AT \$10,000,000 BUT LESS THAN \$25,000,000—continued.													
Lime.....	853	13,897	\$17,951,987	\$11,221,081	104.7	24.6	41.7	228.6	21.7	75.0	203.0	20.5	68.4
Stationery goods, not elsewhere specified.....	153	6,206	16,647,223	8,903,587	90.5	11.7	70.5	84.0	22.6	50.1	89.0	18.8	59.0
Glass, cutting, staining, and ornamenting.....	583	9,362	16,101,129	9,854,685	45.5	-11.5	64.4	117.0	46.5	48.2	140.7	54.3	56.0
Dyestuffs and extracts.....	107	2,397	15,954,574	6,270,923	-3.0	1.6	-4.5	16.1	19.3	-2.7	9.8	15.1	-4.6
Umbrellas and canes.....	256	5,472	15,864,122	5,808,207	61.5	29.9	24.3	130.9	55.6	48.4	132.3	53.0	51.8
Bags, paper.....	74	3,212	15,097,959	5,343,367	86.8	23.6	23.6	136.3	55.6	48.4	132.3	53.0	51.8
Dairymen's, poultryers', and apiarists' supplies.....	233	4,871	15,463,492	9,374,591	37.5	35.6	1.4	119.2	69.7	29.2	117.6	80.8	20.4
Brushes.....	384	6,954	14,694,003	7,507,066	27.2	23.6	2.9	58.6	28.7	23.2	56.3	33.1	17.4
Blacking and cleansing and polishing preparations.....	501	2,417	14,679,120	7,716,728	-3.2	3.2	-6.2	35.5	14.3	18.5	45.7	14.2	30.3
Awnings, tents, and sails.....	621	4,242	14,499,020	6,122,239	402.7	226.1	54.2	488.4	318.6	40.6	735.6	427.2	58.5
Wall paper.....	45	4,037	14,449,247	6,825,896	101.8	14.0	77.0	154.6	36.7	86.2	281.8	60.9	137.3
Brooms.....	898	5,199	14,431,593	6,040,260	6.0	6.0	5.7	5.7	5.7	5.7	5.7	5.3	5.3
Wood preserving.....	53	2,403	14,098,978	4,770,525	-0.1	-9.1	9.9	24.2	1.5	22.3	29.9	-4.2	35.6
Glue.....	65	3,265	13,717,820	6,193,291	-0.1	-0.1	64.5	100.4	18.2	69.5	127.3	20.2	89.1
Hats and caps, other than felt, straw, and wool.....	494	6,201	13,689,338	6,968,886	-20.2	-13.7	-7.6	29.9	3.0	26.2	19.7	6.0	12.8
Signs and advertising novelties.....	288	5,540	13,546,385	8,837,470	27.5	27.5	27.5	28.0	28.0	28.0	28.0	25.0	25.0
Looking-glass and picture frames.....	437	6,021	13,475,082	7,950,076	33.4	34.5	76.3	164.8	70.6	55.3	115.3	59.6	34.9
Liquors, vinous.....	290	1,911	13,120,846	6,495,313	218.0	33.4	138.4	248.0	35.8	156.2	182.9	9.0	159.5
Upholstering materials.....	230	4,067	13,053,561	4,984,867	72.2	47.8	16.0	125.2	91.8	17.4	142.7	98.8	22.1
Wall plaster.....	198	4,791	12,803,758	6,796,581	310.3	53.0	168.1	422.1	14.5	355.8	508.4	42.0	328.5
Surgical appliances and artificial limbs.....	324	4,241	12,599,314	7,027,658	50.3	3.9	44.6	79.0	17.5	52.4	72.3	14.5	50.5
Steam packing.....	153	3,048	12,159,989	5,609,696	73.9	21.7	42.9	133.6	36.6	71.0	191.0	68.7	72.5
Optical goods.....	217	6,898	11,734,811	7,547,354	77.4	14.0	55.6	89.0	101.0	-6.0	161.3	185.9	-8.6
Photographs and graphophones.....	18	5,199	11,725,996	8,626,605	3.4	5.8	-2.3	42.2	20.0	18.5	32.3	16.2	13.8
Photo-engraving.....	313	5,343	11,624,000	9,490,020	331.0	309.5	5.2	697.7	529.4	26.7	464.3	387.2	15.8
Saws.....	96	4,822	11,535,631	6,623,865	73.9	21.7	42.9	133.6	36.6	71.0	191.0	68.7	72.5
Waste.....	53	1,897	11,398,011	2,561,422	77.4	14.0	55.6	89.0	101.0	-6.0	161.3	185.9	-8.6
Matches.....	26	3,631	11,353,138	6,754,260	77.4	14.0	55.6	89.0	101.0	-6.0	161.3	185.9	-8.6
Salt.....	124	4,956	11,327,534	6,124,480	3.4	5.8	-2.3	42.2	20.0	18.5	32.3	16.2	13.8
Hair work.....	250	3,534	11,216,175	5,135,556	331.0	309.5	5.2	697.7	529.4	26.7	464.3	387.2	15.8
Sporting and athletic goods.....	180	5,321	11,052,286	5,487,520	139.1	24.9	91.5	204.6	57.2	93.8	200.5	34.8	122.8
Dentists' materials.....	87	1,573	10,836,553	2,734,236	54.7	-18.2	89.0	191.2	38.7	109.9	69.7	18.9	42.7
Bicycles, motorcycles, and parts.....	95	4,437	10,698,567	5,615,998	-74.7	33.7	-81.1	-66.5	107.6	-83.9	-62.9	122.4	-83.3
Instruments, professional and scientific.....	263	4,817	10,503,601	7,585,617	73.6	40.2	23.9	116.4	95.3	10.8	117.4	88.3	15.4
Lard, refined, not made in slaughtering and meat-packing establishments.....	7	399	10,326,471	695,240	-20.0	-9.5	-11.6	19.6	68.5	-29.0	-38.7	42.1	-56.9
INDUSTRIES WITH PRODUCTS VALUED AT \$5,000,000 BUT LESS THAN \$10,000,000.													
Sulphuric, nitric, and mixed acids.....	42	2,252	9,884,057	4,498,229	-8.0	-8.0	-8.0	9.2	9.2	9.2	10.2	10.2	10.2
Wood distillation, not including turpentine and rosin.....	120	2,721	9,736,998	3,861,147	19.8	19.8	19.8	24.6	24.6	24.6	30.2	30.2	30.2
Peanuts, grading, roasting, cleaning, and shelling.....	46	1,949	9,736,551	1,124,487	202.5	65.9	82.3	358.6	175.3	66.6	617.8	217.5	126.1
Cordials and sirups.....	117	1,095	9,662,176	4,320,908	17.2	13.0	3.7	19.6	25.9	-5.0	21.9	21.5	0.3
Mirrors.....	143	2,994	9,570,797	3,666,091	25.9	23.7	1.8	58.5	20.0	32.2	131.2	83.6	25.9
Lapidary work.....	77	627	9,172,832	2,612,383	32.6	24.1	6.8	22.3	-1.4	24.1	44.7	26.8	14.1
Lead, bar, pipe, and sheet.....	33	802	9,144,930	1,733,397	52.0	29.1	17.8	58.3	56.9	0.9	60.5	42.6	12.5
Springs, steel, car and carriage.....	54	3,196	9,005,362	4,278,092	60.0	50.0	6.6	131.3	95.1	18.5	99.1	65.4	20.4
Models and patterns, not including paper patterns.....	709	4,171	8,868,166	5,991,936	122.9	57.7	41.4	187.8	53.5	87.5	203.8	48.4	104.7
Ink, printing.....	71	1,121	8,865,504	4,690,587	-1.8	-20.4	23.3	39.9	13.6	23.2	44.8	13.9	27.1
Flavoring extracts.....	420	1,229	8,828,034	4,369,806	94.4	32.4	46.8	105.2	38.2	48.5	103.8	32.4	53.9
Carriages and sleds, children's.....	84	5,300	8,805,129	4,676,255	28.3	13.6	12.9	67.7	46.4	14.6	64.1	39.2	17.9
Scales and balances.....	87	3,559	8,785,642	6,081,645	6.1	-2.7	36.3	45.0	9.1	32.9	49.4	5.1	42.2
Boxes, cigar.....	274	6,115	8,491,082	4,178,038	64.4	-4.2	71.6	116.2	8.0	100.1	125.5	8.6	107.7
Safes and vaults.....	42	3,343	8,490,541	5,048,011	-1.0	0.9	-1.9	42.4	16.3	22.5	24.5	2.1	22.0
Vinegar and cider.....	226	5,305	8,264,135	4,709,897	60.0	25.5	30.6	106.1	48.2	31.9	100.9	43.2	40.3
Toys and games.....	74	2,367	8,236,319	2,856,349	72.6	-1.9	76.1	114.0	27.9	67.3	171.7	28.5	111.5
Hat and cap materials.....	24	295	8,200,533	776,875	99.3	-27.0	173.0	287.7	12.8	243.8	0.8	-24.2	33.0
Butter, reworking.....	57	2,765	8,191,620	4,219,208	-38.2	-24.9	-17.8	-44.6	-8.2	-39.6	-32.1	0.4	-31.8
Iron and steel, nails and spikes, cut and wrought, including wire nails not made in steel works or rolling mills.....	12	606	8,147,629	1,650,997	-44.1	16.1	-51.8	-34.8	46.2	-55.4	-66.0	40.4	-75.8
Oleomargarine.....	211	3,572	8,113,989	4,304,240	71.9	24.4	38.2	98.5	44.7	37.2	121.4	38.7	59.6
Flags, banners, regalia, society badges, and emblems.....	14	3,583	7,809,866	3,549,396	-0.1	-24.2	31.9	6.9	-28.0	48.4	6.4	-35.5	64.9
Cars, street railroad, not including operations of railroad companies.....	88	2,041	7,446,364	2,445,658	6.0	-2.3	8.5	10.6	-11.4	24.9	31.7	4.0	26.6
Shoddy.....	11	4,134	7,378,744	3,783,111	91.2	34.9	41.8	232.1	66.7	99.2	217.6	44.3	120.2
Pencils, lead.....	46	1,447	7,338,330	1,619,631	170.5	15.2	134.8	197.0	14.3	159.8	104.2	-3.3	111.1
Galvanizing.....	149	3,390	7,167,100	4,027,239	148.7	10.0	126.1	190.4	25.3	131.8	185.6	20.3	137.4
Show cases.....	51	1,943	6,710,666	4,059,351	255.9	142.6	46.7	385.6	225.5	49.2	365.1	199.2	55.4
Emergency and other abrasive wheels.....	49	4,638	6,694,095	4,365,421	74.8	17.0	49.5	106.7	40.9	46.7	117.2	37.8	57.6
Needles, pins, and hooks and eyes.....	34	2,337	6,676,599	3,345,236	14.3	21.2	-5.7	53.4	39.2	10.1	53.3	34.5	14.0
Windmills.....	63	1,797	6,555,597	4,113,059	86.6	22.3	52.5	117.4	41.5	53.7	103.8	51.8	34.3
Soda-water apparatus.....	174	2,850	6,383,694	4,618,692	18.4	6.4	11.3	69.2	27.6	32.7	53.7	16.3	32.2
Stereotyping and electrotyping.....	49	1,419	6,229,400	2,751,794	-41.7	-26.1	-21.2	58.3	23.8	27.9	16.9	16.2	0.6
Paving materials.....	11	3,464	6,198,955	3,890,429	75.8	75.8	75.8	138.4	190.5	-17.9	132.0	177.5	-16.4
Screws, wood.....	11	3,464	6,198,955	3,890,429	75.8	75.8	75.8	138.4	190.5	-17.9	132.0	177.5	-16.4

¹ A minus sign (-) denotes decrease.

SUMMARY, BY INDUSTRIES.

SUMMARY OF STATISTICS, BY INDUSTRIES—Continued.

(See note at head of this table.)

INDUSTRY.	CENSUS OF 1900.				PER CENT OF INCREASE. ¹								
	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Wage earners (average number).			Value of products.			Value added by manufacture.		
					1899-1900	1904-1909	1899-1904	1899-1900	1904-1909	1899-1904	1899-1900	1904-1909	1899-1904
INDUSTRIES WITH PRODUCTS VALUED AT \$5,000,000 BUT LESS THAN \$10,000,000—continued.													
Drug grinding.....	25	922	\$6,006,999	\$2,553,279	43.2	-6.0	52.3	39.4	16.7	19.5	157.1	20.3	113.7
Cork cutting.....	62	3,142	5,839,933	2,505,317	34.3	8.5	23.7	35.2	32.3	2.3	26.0	23.3	2.2
Billiard tables and materials.....	54	1,495	5,877,837	2,509,159	230.0	87.8	75.7	256.7	164.4	34.9	173.0	95.1	39.9
Washing machines and clothes wringers.....	100	1,835	5,824,889	2,987,528	21.6	13.1	7.5	56.0	51.7	2.8	91.5	83.8	4.2
Baskets, and rattan and willow ware.....	456	4,664	5,695,356	3,359,948	10.6	-3.7	21.1	58.6	9.8	42.7	46.0	-0.7	47.1
Files.....	57	4,158	5,601,203	4,095,473	31.6	26.9	3.7	67.2	29.6	29.0	83.0	32.9	37.7
Pumps, not including steam pumps.....	102	2,136	5,582,962	3,096,360	238.0	52.1	122.2	316.0	95.7	112.6	339.8	86.5	135.8
Pipes, tobacco.....	62	2,775	5,311,900	2,853,245	75.1	42.5	22.8	114.9	87.4	14.6	108.9	92.8	8.3
Wool pulling.....	37	631	5,180,856	1,077,606	32.8	-7.3	43.4	875.7	457.4	66.1	126.0	38.6	63.1
INDUSTRIES WITH PRODUCTS LESS THAN \$5,000,000 IN VALUE.													
Mucilage and paste.....	127	538	4,018,341	1,634,900	17.5	14.5	2.6	92.4	38.3	39.1	73.4	30.3	33.1
Pens, fountain, stylographic, and gold.....	65	1,225	4,738,893	2,492,239	76.0	31.3	34.1	177.8	70.8	62.6	139.3	55.0	54.3
Type founding and printing materials.....	122	2,026	4,703,506	2,931,275	2.1	12.4	-9.1	19.6	19.5	0.1	10.1	4.1	5.8
Kaolin and ground earths.....	119	1,990	4,680,548	2,630,737	-5.0	-7.7	3.0	25.8	5.5	19.3	27.4	2.7	24.1
Labels and tags.....	96	2,313	4,669,965	2,759,626	206.8	71.6	78.8	322.6	89.7	122.8	284.9	83.4	109.9
Electroplating.....	461	2,717	4,509,559	3,304,374	30.2	39.8	-6.9	65.8	52.1	9.0	70.7	49.0	14.6
Sand and emery paper and cloth.....	10	611	4,357,792	1,975,334	123.0	100.3	11.3	270.6	195.1	25.6	299.2	368.2	-14.7
Moving pictures.....	16	506	4,206,448	2,014,323	52.8	43.0	6.8	121.2	65.0	34.0	109.5	61.8	29.5
Lasts.....	60	1,728	4,158,933	2,834,478	186.6	55.0	84.9	216.9	93.2	64.0	198.0	67.9	77.5
Clothing, horse.....	33	1,648	4,134,864	1,361,476	20.1	-0.5	20.7	44.4	25.5	15.1	62.4	24.8	30.1
Whips.....	57	1,546	3,948,643	2,363,900	12.3	9.6	2.4	40.7	30.7	7.7	30.7	22.8	6.5
Hand stamps and stencils and brands.....	361	1,651	3,673,025	2,545,722	12.7	12.7	12.7	42.4	42.4	75.5	120.0	25.9	74.8
Statuary and art goods.....	194	1,699	3,441,546	2,761,216	17.4	-10.8	31.6	114.6	22.3	60.1	120.0	25.9	91.0
Tin foil.....	10	683	3,418,818	1,819,613	27.2	27.2	27.2	114.6	22.3	60.1	120.0	25.9	91.0
Enameling and japanning.....	108	2,125	3,315,694	1,819,613	58.6	46.6	8.2	269.6	212.3	18.3	67.7	39.3	20.4
Wool scouring.....	28	1,142	3,289,215	1,167,113	24.2	-14.8	-11.1	4.9	-7.3	2.6	6.8	-0.6	7.4
Musical instruments and materials, not specified.....	187	1,822	3,228,108	2,338,508	152.7	23.5	104.6	169.3	36.0	98.1	162.8	30.8	101.0
Candles.....	16	539	3,130,521	954,419	7.1	-15.2	26.2	46.4	11.1	31.7	46.9	5.3	39.5
Jewelry and instrument cases.....	120	2,070	3,116,619	1,895,242	129.0	129.0	129.0	407.4	103.5	361.6	744.6	96.9	328.9
Screws, machine.....	43	1,667	3,014,112	1,853,634	18.9	-1.4	20.6	-1.4	-2.4	1.1	4.7	-3.8	14.8
Iron and steel, doors and shutters.....	88	1,383	2,630,500	1,112,626	10.3	-14.9	29.6	364.6	15.3	303.0	349.7	1.9	241.2
Gold and silver, leaf and foil.....	27	921	2,610,714	1,964,744	50.4	14.2	31.7	46.3	33.9	9.3	65.8	31.5	26.1
Paper patterns.....	423	1,982	2,587,569	1,878,948	77.2	17.4	50.9	93.7	33.2	45.5	98.2	39.5	42.1
Carpets, rag.....	47	505	2,505,414	1,427,406	49.9	-47.8	108.8	95.7	6.7	110.3	104.0	0.4	78.9
Ink, writing.....	12	937	2,431,615	1,365,049	48.6	12.3	32.3	70.8	129.7	79.5	116.8	82.3	82.3
Mats and matting.....	93	1,241	2,390,959	1,580,159	229.0	140.1	37.0	370.8	105.4	129.2	296.2	116.8	136.4
Furs, dressed.....	46	658	2,339,935	979,445	66.9	47.3	13.3	103.5	117.0	-6.2	104.8	136.4	-13.4
Artists' materials.....	49	654	2,297,690	1,025,804	-14.3	-5.2	-9.6	27.1	14.2	11.3	18.7	12.7	5.3
Foundry supplies.....	42	1,403	2,269,349	1,373,159	35.7	-16.8	63.2	53.3	-7.1	65.0	50.1	-7.2	61.7
Fireworks.....	253	1,308	2,249,861	1,899,097	19.6	-58.3	-29.1	37.7	-48.5	-18.6	30.8	-37.8	20.6
Engraving and diesinking.....	14	538	2,230,033	616,452	13.3	12.5	0.7	39.7	20.7	15.8	28.9	6.8	58.0
Haircloth.....	12	335	1,849,326	760,144	72.6	119.7	-21.4	113.7	18.6	80.2	115.2	36.2	36.2
Crucibles.....	14	783	1,770,107	799,169	19.5	97.5	-39.5	55.0	114.2	-27.6	47.9	132.8	-36.5
Pulp goods.....	68	290	1,737,234	481,756	106.9	13.7	81.9	257.9	37.9	159.5	232.1	33.0	149.6
Oil, essential.....	14	1,394	1,688,171	1,219,979	82.6	22.6	48.9	172.8	46.6	86.0	165.8	43.9	84.7
Grindstones.....	24	664	1,625,478	910,601	38.6	47.9	-6.3	106.3	68.5	22.4	82.4	27.8	42.7
Wheelbarrows.....	57	975	1,543,872	1,458,669	18.2	-23.7	59.1	165.7	233.3	-20.3	246.7	226.7	6.1
Cloth, sponging and refinishing.....	38	178	1,480,811	652,698	14.0	(?)	203.6	68.7	80.0	155.1	45.6	75.2	24.8
Axle grease.....	9	162	1,139,587	734,108	42.3	51.9	-6.4	86.5	58.2	17.9	75.2	40.4	98.4
Graphite and graphite refining.....	27	228	1,093,494	648,886	61.5	-24.6	114.2	66.8	-4.8	75.2	115.4	8.6	80.2
Bone, carbon, and lamp black.....	82	313	1,074,231	580,489	26.8	26.3	0.4	103.8	-27.0	60.4	129.5	21.4	80.2
Bluing.....	68	526	1,081,392	657,279	137.0	47.3	60.9	183.1	97.7	43.2	214.2	91.6	64.0
Card cutting and designing.....	19	293	1,014,576	658,722	(?)	(?)	(?)	226.6	438.6	-39.4	122.9	316.0	-46.4
Horseshoes, not made in steel works or rolling mills.....	37	327	956,720	618,390	(?)	(?)	(?)	129.1	40.7	62.8	139.2	56.4	52.9
Vault lights and ventilators.....	18	129	920,727	311,674	(?)	(?)	(?)	129.1	40.7	62.8	139.2	56.4	52.9
Engravers' materials.....	4	54	904,825	245,647	-64.7	-31.6	-45.3	-23.1	-32.5	13.9	-41.8	-34.8	-10.8
Oil, castor.....	76	631	872,522	424,945	10.1	45.8	-24.5	62.1	140.4	-32.6	70.9	116.9	-21.2
Charcoal.....	40	328	786,293	475,176	-12.1	-8.1	-4.3	14.7	11.6	2.8	16.0	11.7	3.8
China decorating.....	146	830	780,720	676,143	(?)	(?)	(?)	245.9	29.6	167.0	205.4	6.2	6.7
Clothing, men's, buttonholes.....	31	195	754,165	449,344	-5.4	-5.9	0.6	15.8	9.7	5.5	5.5	-0.5	8.4
Fire extinguishers, chemical.....	82	318	711,279	585,178	-19.8	0.4	-20.1	20.4	29.3	6.9	12.7	3.9	8.4
Engraving, wood.....	15	272	678,505	267,259	47.8	5.4	40.2	96.3	21.7	61.2	99.2	29.9	53.3
Hammocks.....	5	699	576,696	481,430	-69.7	-50.7	-33.7	-53.6	-38.8	-24.2	-50.0	-41.8	-29.6
Pens, steel.....	10	184	490,389	262,654	-22.3	-23.4	1.4	193.7	34.6	118.2	92.6	14.9	67.5
Wood carpet.....	16	164	467,346	131,046	-33.9	-20.4	-17.0	-23.2	-6.4	-18.0	-32.1	-11.7	-23.1
Flax and hemp, dressed.....	6	113	338,497	106,505	-19.6	-30.9	16.4	36.7	-13.0	57.1	19.7	-22.9	55.3
Oakum.....	11	88	311,010	156,362	-48.8	(?)	(?)	-30.8	-42.2	19.7	-16.3	-41.8	43.7
Fuel, manufactured.....	18	152	267,932	157,685	(?)	(?)	(?)	-56.3	-61.5	13.4	-66.7	-72.0	19.0
Hones and whetstones.....	9	109	143,811	112,679	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)
Rules, ivory and wood.....	10	15	52,216	28,323	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)
Calcium lights.....	8	96	390,206	275,154	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)	(?)
All other industries.....													

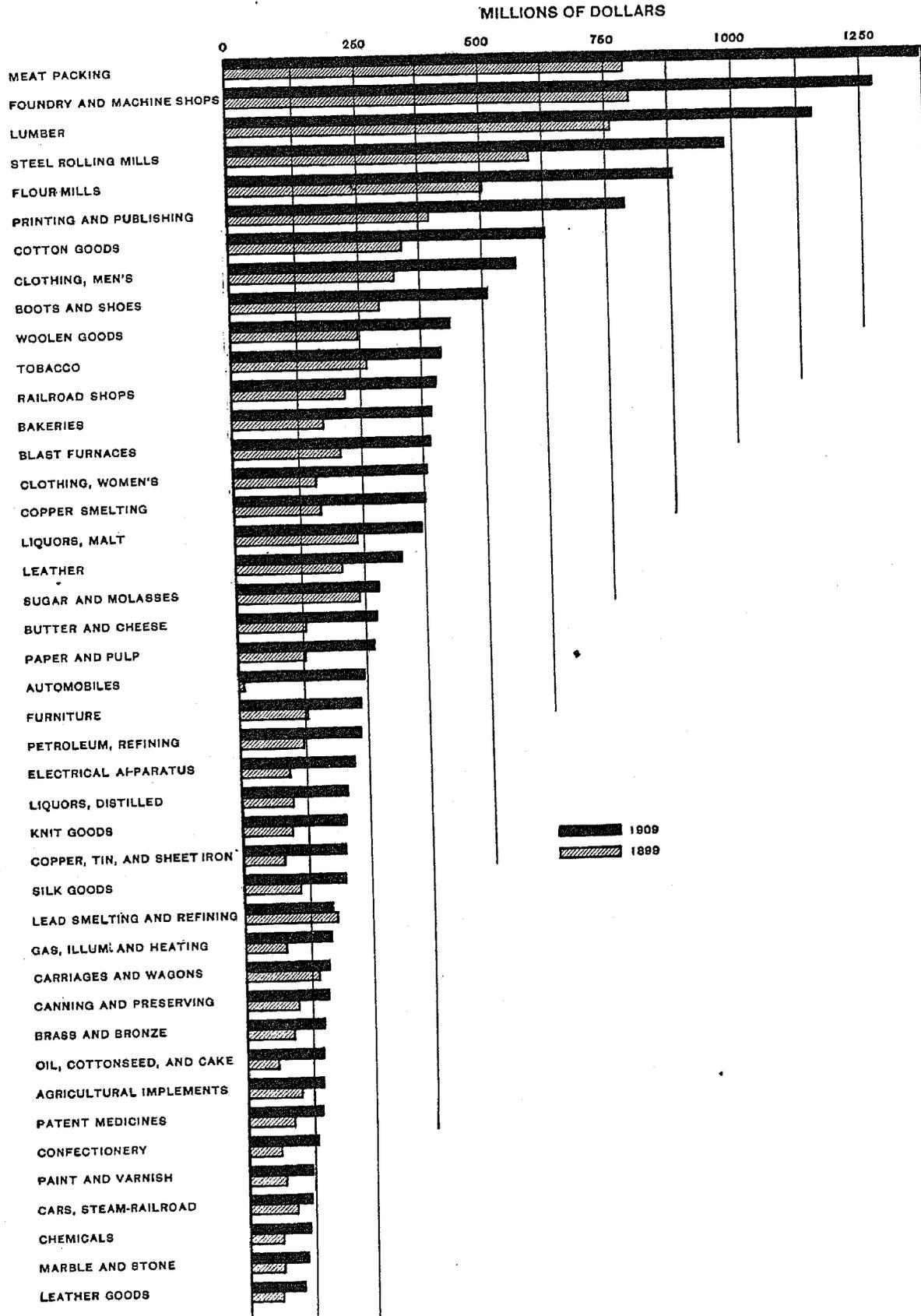
1 A minus sign (-) denotes decrease.

1 Percentage not shown where base is less than 100.

MANUFACTURES.

The following diagram shows graphically the value of products reported for the 48 leading industries in 1909 and 1899. It has been necessary to abbreviate some of the industry designations.

VALUE OF PRODUCTS FOR LEADING INDUSTRIES: 1909 AND 1899.



For reasons indicated in the introduction to this chapter, the statistics of some of the industries, as shown in this table, are more or less unsatisfactory as an index of the relative importance of the industries. For several of the industries shown in the table the figures given fall far short of presenting complete statistics for the branch of industry covered by the industry designation, for the reason that the same products are made or the same processes carried on to a considerable extent by establishments which were of necessity assigned to some other classification. Conspicuous examples are the industries designated as "glue," "candles," "lard, refined, not made in slaughtering and meat-packing establishments," "oleomargarine," "wire," "fertilizers," and "dyeing and finishing textiles." More than nine-tenths of the lard produced in the country and a large quantity of the oleomargarine, glue, and fertilizers are made by slaughtering and meat-packing establishments, and fertilizers are also made in cottonseed-oil mills. As already stated, almost as much wire was produced in 1909 by establishments classed as steel works and rolling mills as by establishments classified as engaged in the wire industry. The dyeing and finishing of textiles is carried on to a very considerable extent in the same establishments as the primary manufacturing process, so that the statistics for independent dyeing and finishing establishments fall far short of being a

complete presentation for this branch of manufacturing. The industries above named are merely conspicuous examples of conditions that exist in a good many other cases as well.

Rank of industries in number of wage earners, value of products, and value added by manufacture.—Table 2 shows for each of the 259 industries for which figures are shown separately in the preceding table its rank in 1909 as determined by number of wage earners, value of products, and value added by manufacture, respectively, and also its rank according to value of products in 1904 and 1899. In addition it shows for 1909 the ratio which the value added by manufacture for each industry bore to the value of products. The industries are listed in the same order as in the preceding table, that is, according to their value of products in 1909.

The rank of some of the minor industries has comparatively little significance, but, since the industries in some cases rank very differently according to the three different standards used, it is desirable for the sake of clearness to include every industry. In considering the rank of the industries it should be borne in mind that, as already stated, some of the classifications represent in a sense groups of industries rather than individual industries, and that in some cases the data given by no means cover the entire operations of the branch of manufactures indicated by the industry designation.

RANK OF EACH INDUSTRY AND RELATION OF VALUE ADDED BY MANUFACTURE TO TOTAL VALUE OF PRODUCTS.

INDUSTRY.	RANK.				Per cent value added by manufacture formed of total value of products: 1909	INDUSTRY.	RANK.				Per cent value added by manufacture formed of total value of products: 1909
	1909		1904	1899			1909		1904	1899	
	Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.			Value of products.	Value of products.	Value of products.	Value of products.	
All industries					41.3						
Slaughtering and meat packing.....	16	1	13	1	2	12.2					
Foundry and machine-shop products ¹	2	2	1	3	1	56.0					
Lumber and timber products.....	1	3	2	2	3	56.0					
Iron and steel, steel works and rolling mills.....	6	4	4	5	4	33.3					
Flour-mill and gristmill products.....	37	5	18	4	5	13.1					
Printing and publishing.....	5	6	3	6	6	72.7					
Cotton goods, including cotton small wares.....	3	7	7	7	7	41.0					
Clothing, men's, including shirts.....	7	8	6	8	8	47.6					
Boots and shoes, including cut stock and findings.....	8	9	10	9	9	35.1					
Woolen, worsted, and felt goods, and wool hats.....	9	10	15	11	11	35.1					
Tobacco manufactures.....	10	11	8	10	10	57.5					
Cars and general shop construction and repairs by steam-railroad companies.....	4	12	9	12	14	50.8					
Bread and other bakery products.....	14	13	14	15	18	40.0					
Iron and steel, blast furnaces.....	40	14	30	19	15	18.1					
Clothing, women's.....	11	15	11	17	20	45.7					
Smelting and refining, copper.....	70	16	43	18	19	12.0					
Liquors, malt.....	28	17	5	13	13	74.2					
Leather, tanned, curried, and finished.....	25	18	27	16	16	24.3					
Butter, cheese, and condensed milk.....	61	19	51	24	22	14.2					
Paper and wood pulp.....	19	20	21	20	24	38.2					
Automobiles, including bodies and parts.....	20	21	17	77	150	47.2					
Sugar, refining, not including beet sugar ²	89	22	72	14	12	9.0					
Furniture and refrigerators.....	13	23	16	22	23	54.7					
Petroleum, refining.....	76	24	53	23	25	15.9					
Electrical machinery, apparatus, and supplies.....	17	25	20	26	31	50.9					
Liquors, distilled.....	102	26	12	29	29	82.4					
Hosiery and knit goods.....	12	27	23	27	30	44.9					
Copper, tin, and sheet-iron products ³	21	28	25	32	35	43.7					
Silk and silk goods, including throwsters.....	15	29	24	23	25	45.3					
Smelting and refining, lead.....	97	30	87	21	17	9.2					
Gas, illuminating and heating.....	42	31	19	31	36	68.6					
Carriages and wagons and materials.....	22	32	28	25	21	48.7					
Canning and preserving.....	26	33	33	30	23	35.2					

¹ "Foundry and machine-shop products" for 1899 includes "stoves and furnaces, including gas and oil stoves," and "locomotives, not made by railroad companies."
² "Sugar, refining, not including beet sugar," for 1904 and 1899 includes "sugar and molasses," also some establishments compounding table sirup which were included under "food preparations" in 1909.
³ Includes for 1909 some establishments manufacturing enameled stamped ware which were included under "enameling and japanning" for 1904 and 1909.

MANUFACTURES.

RANK OF EACH INDUSTRY AND RELATION OF VALUE ADDED BY MANUFACTURE TO TOTAL VALUE OF PRODUCTS—Continued.

INDUSTRY.	RANK.				Per cent value added by manufacture formed of total value of products: 1909	INDUSTRY.	RANK.				Per cent value added by manufacture formed of total value of products: 1909	
	1909		1904	1899			1909		1904	1899		
	Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.			Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.		
Brass and bronze products.....	33	34	37	36	34	33.8	104	96	100	98	130	41.3
Oil, cottonseed, and cake.....	68	85	61	37	44	19.0	91	97	90	92	96	51.2
Agricultural implements.....	29	36	26	34	27	58.8						
Patent medicines and compounds and druggists' preparations.....	56	37	22	33	33	64.5						
Confectionery.....	30	38	35	39	42	39.8	84	98	94	109	95	47.7
Rubber goods, not elsewhere specified ¹	50	39	40	52	47	36.0	86	99	99	173	137	43.2
Food preparations ²	71	40	48	55	59	33.0	96	100	75	133	143	85.0
Paint and varnish.....	74	41	42	38	38	36.7	153	101	113	111	107	34.1
Cars, steam-railroad, not including operations of railroad companies.....	32	42	44	35	32	36.4	83	102	98	99	89	44.1
Chemicals ³	55	43	36	45	41	45.5	233	103	213	97	103	6.9
Marble and stone work ⁴	24	44	29	40	40	66.9	130	104	116	96	102	33.6
Soap ⁵	79	45	50	48	46	35.2	117	105	117	107	104	33.4
Coffee and spice, roasting and grinding ⁶	95	46	62	41	39	24.7	68	106	89	123	124	58.0
Leather goods.....	44	47	45	43	43	42.7	81	107	92	100	100	54.2
Fertilizers.....	62	48	55	58	53	33.1	119	108	85	117	122	70.3
Coke.....	48	49	57	60	60	33.1	156	109	125	110	111	30.7
Brick and tile.....	18	50	31	46	48	74.4						
Glass.....	23	51	32	44	45	65.1	205	110	182	104	117	12.8
Musical instruments, pianos and organs and materials.....	41	52	41	49	58	61.3	75	111	91	93	93	56.1
Furnishing goods, men's ⁷	39	53	52	63	54	44.0	208	112	102	128	(9)	46.5
Millinery and lace goods ⁸	38	54	49	62	64	47.6	169	113	96	95	61	55.1
Wire.....	63	55	68	65	112	28.3	93	114	101	121	108	49.5
Dyeing and finishing textiles.....	31	56	39	61	52	57.8	215	115	174	116	114	17.7
Jewelry.....	47	57	46	59	51	54.4	88	116	86	127	129	79.3
Stoves and furnaces, including gas and oil stoves.....	43	58	38	53	(7)	62.8	161	117	129	94	98	35.1
Pottery, terra-cotta, and fire-clay products.....	27	59	34	51	55	71.2	87	118	95	187	(1)	62.1
Shipbuilding, including boat building.....	34	60	47	42	37	57.4	139	119	141	139	119	31.9
Carpets and rugs, other than rag.....	45	61	59	54	50	44.4						
Cement.....	49	62	56	78	(8)	53.6						
Cordage and twine and jute and linen goods.....	52	63	77	50	49	32.9	121	120	134	105	94	33.2
Cooperage and wooden goods, not elsewhere specified.....	51	64	71	57	56	38.7	77	121	97	108	65	62.5
Fur goods.....	82	65	66	67	71	43.2	106	122	109	141	147	53.5
Paper goods, not elsewhere specified.....	59	66	69	71	72	43.4	90	123	103	115	110	61.2
Bags, other than paper.....	94	67	112	66	81	15.5	164	124	132	125	126	39.3
Boxes, fancy and paper.....	35	68	60	68	68	52.8	111	125	142	113	99	36.6
Cutlery and tools, not elsewhere specified.....	46	69	54	64	65	65.7	150	126	147	131	131	34.0
Boots and shoes, rubber.....	64	70	76	47	57	40.5						
Glucose and starch.....	126	71	93	74	63	24.4	122	127	106	158	(10)	60.6
Beet sugar.....	98	72	73	87	127	43.3	99	128	122	91	84	51.1
Tin plate and terneplate.....	112	73	138	70	62	12.7						
Hats, fur-felt.....	53	74	64	69	67	53.8	162	129	119	142	133	52.6
Gas and electric fixtures and lamps and reflectors.....	00	75	65	84	80	54.6	131	130	136	121	115	42.2
Mineral and soda waters.....	78	76	63	76	73	62.2	138	131	126	120	106	47.2
Ice, manufactured.....	69	77	58	89	97	73.7	118	132	139	(11)	(11)	41.9
Silverware and plated ware.....	67	78	70	73	70	56.6	163	133	152	194	186	33.8
Wirework, including wire rope and cable.....	80	79	79	72	79	41.8	149	134	133	132	144	45.1
Explosives.....	105	80	80	80	88	43.2	107	135	124	118	75	51.1
Malt.....	185	81	118	75	82	20.4	110	136	110	(12)	(12)	65.2
Oil, linseed.....	197	82	143	83	69	15.5	109	137	114	114	105	59.0
Mattresses and spring beds.....	85	83	88	82	87	42.8	180	138	131	124	134	49.5
Clocks and watches, including cases and materials.....	54	84	67	79	74	68.4						
Smelting and refining, zinc.....	101	85	108	86	86	26.2	137	139	150	119	110	38.2
Firearms and ammunition.....	73	86	81	81	85	50.1	125	140	127	130	(13)	53.1
Corsets.....	65	87	78	106	92	53.0	132	141	123	153	151	56.7
Cars and general shop construction and repairs by street-railroad companies.....	57	88	83	112	113	52.5	140	142	145	138	170	45.3
Locomotives, not made by railroad companies.....	72	89	84	56	(7)	52.3	103	143	121	163	146	64.3
Iron and steel pipe, wrought.....	100	90	115	102	76	25.7						
Oil, not elsewhere specified.....	187	91	105	90	83	30.6						
Sugar and molasses.....	136	92	107	(*)	(*)	30.5						
Sewing machines, cases, and attachments.....	58	93	82	85	77	59.5						
Smelting and refining, not from the ore.....	170	94	151	101	123	17.5						
Turpentine and rosin.....	36	95	74	88	78	80.6						
Belting and hose, woven and rubber.....							104	96	100	98	130	41.3
Coffins, burial cases, and undertakers' goods.....							91	97	90	92	96	51.2
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....							84	98	94	109	95	47.7
Artificial flowers and feathers and plumes.....							86	99	99	173	137	43.2
Cash registers and calculating machines.....							96	100	75	133	143	85.0
Belting and hose, leather.....							153	101	113	111	107	34.1
Gloves and mittens, leather.....							83	102	98	99	89	44.1
Gold and silver, reducing and refining, not from the ore.....							233	103	213	97	103	6.9
Grease and tallow.....							130	104	116	96	102	33.6
Oilcloth and linoleum.....							117	105	117	107	104	33.4
Buttons.....							68	106	89	123	124	58.0
Fancy articles, not elsewhere specified.....							81	107	92	100	100	54.2
Photographic apparatus and materials.....							119	108	85	117	122	70.3
Chocolate and cocoa products.....							156	109	125	110	111	30.7
Rice, cleaning and polishing.....							205	110	182	104	117	12.8
Wood, turned and carved.....							75	111	91	93	93	56.1
Hats, straw.....							92	112	102	128	(9)	46.5
Baking powders and yeast.....							169	113	96	95	61	55.1
Iron and steel forgings.....							93	114	101	121	108	49.5
Babbitt metal and solder.....							215	115	174	116	114	17.7
Typewriters and supplies.....							88	116	86	127	129	79.3
Roofing materials.....							161	117	129	94	98	35.1
Artificial stone.....							87	118	95	187	(1)	62.1
Window shades and fixtures.....							139	119	141	139	119	31.9
House-furnishing goods, not elsewhere specified.....							121	120	134	105	94	33.2
Lime ⁹							77	121	97	108	65	62.5
Stationery goods, not elsewhere specified.....							106	122	109	141	147	53.5
Glass, cutting, staining, and ornamenting.....							90	123	103	115	110	61.2
Dyestuffs and extracts.....							164	124	132	125	126	39.3
Umbrellas and canes.....							111	125	142	113	99	36.6
Bags, paper.....							150	126	147	131	131	34.0
Dairymen's, poultryers', and apiarists' supplies.....							122	127	106	158	(10)	60.6
Brushes ¹¹							99	128	122	91	84	51.1
Blackening and cleansing and polishing preparations.....							162	129	119	142	133	52.6
Awnings, tents, and sails.....							131	130	136	121	115	42.2
Wall paper.....							138	131	126	120	106	47.2
Brooms.....							118	132	139	(11)	(11)	41.9
Wood preserving.....							163	133	152	194	186	33.8
Glue.....							149	134	133	132	144	45.1
Hats and caps, other than felt, straw, and wool ¹²							107	135	124	118	75	51.1
Signs and advertising novelties.....							110	136	110	(10)	(10)	65.2
Looking-glass and picture frames.....							109	137	114	114	105	59.0
Liquors, vinous.....							180	138	131	124	134	49.5
Upholstering materials.....							137	139				

SUMMARY, BY INDUSTRIES.

RANK OF EACH INDUSTRY AND RELATION OF VALUE ADDED BY MANUFACTURE TO TOTAL VALUE OF PRODUCTS—Continued.

INDUSTRY.	RANK.					Per cent value added by manufacture formed of total value of products: 1909	INDUSTRY.	RANK.					Per cent value added by manufacture formed of total value of products: 1909
	1909		1904		1899			1909		1904		1899	
	Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.	Value of products.			Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.	Value of products.	
Cordials and sirups.....	210	159	160	192	190	44.7	Clothing, horse.....	191	208	220	212	203	32.9
Mirrors.....	154	160	172	151	120	38.3	Whips.....	194	209	199	196	176	59.9
Lapidary work.....	224	161	191	150	141	28.5	Hand stamps and stencils and brands.....	190	210	194	200	179	69.3
Lead, bar, pipe, and sheet.....	217	162	209	136	125	19.0	Statuary and art goods.....	188	211	186	208	(1)	80.2
Springs, steel, car and carriage.....	151	163	162	166	142	47.5	Tin foil.....	220	212	223	201	197	33.4
Models and patterns, not including paper patterns.....	133	164	140	182	163	67.6	Enameling and japanning ¹	172	213	208	103	109	54.9
Ink, printing.....	209	165	154	165	174	52.9	Wool scouring.....	208	214	222	229	214	35.5
Flavoring extracts.....	206	166	158	149	136	49.5	Musical instruments and materials, not specified.....	183	215	200	193	172	72.4
Carriages and sleds, children's.....	116	167	155	161	155	53.1	Candles.....	227	216	229	189	(1)	30.6
Scales and balances.....	144	168	137	164	145	69.2	Jewelry and instrument cases.....	173	217	205	209	208	60.8
Boxes, cigar.....	108	169	164	148	140	49.2	Screws, machine.....	189	218	207	203	191	61.5
Safes and vaults.....	148	170	149	145	161	59.5	Iron and steel, doors and shutters.....	192	219	210	219	234	57.3
Vinegar and cider.....	195	171	175	155	139	41.2	Gold and silver, leaf and foil.....	202	220	225	204	178	42.3
Toys and games.....	115	172	153	170	158	57.0	Paper patterns.....	214	221	203	210	222	75.3
Hat and cap materials.....	165	173	183	159	162	34.7	Carpets, rag.....	177	222	206	216	194	73.2
Butter, reworking.....	240	174	232	152	189	9.5	Ink, writing.....	231	223	217	217	204	57.0
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	158	175	163	140	90	51.5	Mats and matting.....	212	224	219	224	207	56.1
Oleomargarine.....	226	176	211	171	101	20.3	Furs, dressed.....	204	225	215	195	200	66.1
Flags, banners, regalia, society badges and emblems.....	143	177	161	169	157	53.0	Artists' materials.....	222	226	228	226	225	41.9
Cars, street-railroad, not including operations of railroad companies.....	142	178	173	126	128	45.4	Foundry supplies.....	232	227	227	228	210	44.6
Shoddy.....	174	179	198	143	132	32.8	Fireworks.....	200	228	218	215	193	60.5
Pencils, lead.....	135	180	171	185	188	51.3	Musical engraving and diesinking.....	203	229	204	207	198	84.4
Galvanizing.....	198	181	214	160	184	22.1	Haircloth.....	228	230	242	(*)	(*)	27.6
Show cases.....	147	182	168	167	185	56.2	Crucibles.....	235	231	233	222	180	41.1
Emery and other abrasive wheels.....	179	183	167	214	201	60.5	Pulp goods.....	218	232	231	220	205	45.1
Needles, pins, and hooks and eyes.....	128	184	159	190	173	65.2	Oil, essential.....	242	233	245	221	215	27.7
Windmills.....	166	185	177	179	153	50.1	Grindstones.....	201	234	221	234	212	72.3
Soda-water apparatus.....	184	186	165	181	175	62.7	Wheelbarrows.....	221	235	230	225	228	56.0
Stereotyping and electrotyping.....	155	187	156	178	164	72.3	Cloth, sponging and refinishing.....	211	236	216	239	221	94.5
Paving materials.....	199	188	188	177	159	44.2	Axle grease.....	247	237	239	231	216	44.1
Screws, wood.....	146	189	169	213	181	62.8	Graphite and graphite refining.....	249	238	234	245	230	64.4
Drug grinding.....	213	190	193	176	154	42.5	Bone, carbon, and lamp black.....	244	239	240	237	232	59.3
Cork, cutting.....	152	191	196	183	152	42.2	Bluing.....	239	240	244	236	230	54.0
Billiard tables and materials.....	196	192	185	211	196	42.7	Card cutting and designing.....	229	241	238	227	218	63.7
Washing machines and clothes wringers.....	182	193	180	190	165	51.3	Horseshoes, not made in steel works or rolling mills.....	241	242	237	233	234	64.9
Baskets, and rattan and willow ware.....	127	194	178	174	168	59.0	Vault lights and ventilators.....	237	243	241	240	233	64.6
Files.....	134	195	168	186	171	72.0	Engravers' materials.....	251	244	250	249	236	33.8
Pumps, not including steam pumps.....	171	196	179	198	202	55.5	Oil, castor.....	255	245	253	238	231	26.9
Pipes, tobacco.....	157	197	184	199	183	53.7	Charcoal.....	223	246	249	223	209	48.7
Wool pulling.....	223	198	226	230	223	20.8	China decorating.....	236	247	247	246	226	60.4
Mucilage and paste.....	228	199	212	191	182	33.2	Clothing, men's, buttonholes.....	216	248	236	235	217	86.6
Pens, fountain, stylographic, and gold.....	207	200	197	202	195	52.6	Fire extinguishers, chemical.....	245	249	248	239	237	59.6
Type founding and printing materials.....	175	201	181	188	180	62.3	Engraving, wood.....	238	250	243	237	219	82.3
Kaolin and ground earths.....	176	202	190	184	166	56.4	Hammocks.....	243	251	251	242	227	46.2
Labels and tags.....	167	203	187	206	211	59.1	Pens, steel.....	219	252	246	241	235	83.5
Electroplating.....	160	204	178	197	177	73.3	Wood carpet.....	246	253	252	232	213	53.6
Sand and emery paper and cloth.....	225	205	202	219	206	45.3	Flax and hemp, dressed.....	243	254	256	244	240	28.0
Moving pictures.....	230	206	201	(1)	(1)	47.9	Oakum.....	252	255	258	243	229	31.5
Lasts.....	186	207	185	205	192	68.2	Fuel, manufactured.....	254	256	255	(1)	(1)	50.3
							Hones and whetstones.....	250	257	254	247	239	58.9
							Rules, ivory and wood.....	253	258	257	249	238	78.6
							Calcium lights.....	256	259	259	250	241	54.2

¹ Industry not reported.

² Included under other classifications.

³ Includes for 1904 and 1899 some establishments manufacturing enameled stamped ware which are included under "copper, tin, and sheet-iron products" for 1909.

⁴ Included under "soap."

From certain standpoints the number of wage earners and the value added by manufacture constitute better measures of the relative importance of manufacturing industries than the value of products. In some industries the value of the materials used constitutes by far the larger part of the total value of products, the manufacturing process involving the addition of only a small amount of labor cost and other expenses and of the manufacturer's profit to

the cost of materials. In other words, the farm, the forest, the mine, or the sea—or perhaps manufacturing establishments in other industries which furnished partly finished materials—have chiefly contributed to the total value of products of such industries. Moreover, in some of the industries there is much greater duplication in the total value of products than in others, as the result of the use of the products of one establishment in the industry as materials for other

establishments. This duplication, of course, does not appear in the value added by manufacture or in the number of wage earners. In a few industries, however, there is considerable duplication in the value added by manufacture, due to the method of reporting contract work (see Chapter I).

Some of the industries that hold a very high rank in value of products rank comparatively low in value added by manufacture; usually where this is the case they also rank low in number of wage earners. In such industries the cost of materials represents a large proportion of the total value of products, and therefore the value added by manufacture, of which wages usually constitute the largest factor, is not commensurate with the total value of products.

There are three industries which in 1909 reported a value of products exceeding a billion dollars, namely, the slaughtering and meat-packing, foundry and machine-shop, and lumber industries. There are six others whose products exceeded half a billion dollars in value, namely, the steel works and rolling mills, the flour-mill and gristmill industry, printing and publishing, and the manufacture of cotton goods, of men's clothing, and of boots and shoes. Some of these leading industries, however, ranked quite differently with respect to number of wage earners or value added by manufacture. Thus the slaughtering and meat-packing industry, which ranked first in value of products, and the flour-mill and gristmill industry, which ranked fifth in that respect, both held a comparatively low rank in number of wage earners and value added by manufacture. On the other hand, the lumber industry, which ranked third with respect to value of products, ranked first with respect to number of wage earners and second with respect to value added by manufacture, and the foundry and machine-shop industry ranked first with respect to value added by manufacture, but second both in number of wage earners and in value of products. The blast-furnace industry, the smelting and refining of copper, the refining of sugar, the manufacture of butter, cheese, and condensed milk, and the refining of petroleum are other important industries which ranked much higher in value of products than in average number of wage earners or value added by manufacture.

Among the important industries, on the other hand, which have decidedly higher rank in average number of wage earners and value added by manufacture than in value of products are the furniture and refrigerator, marble and stone work, agricultural implement, brick and tile, glass, and piano and organ industries.

The foundry and machine-shop industry, the lumber industry, the steel works and rolling mills, the printing and publishing industry, and the manufacture of cotton goods, of men's clothing, and of boots and shoes all ranked in 1909 among the first 10 industries of the country, according to each of the three standards used.

It may be noted at this point that there are a few

industries whose products are subject to special taxation by the Federal Government in the form of internal revenue taxes and that the amount of such taxes is included (at least substantially) both in the value of products and in the value added by manufacture. The principal industries subject to internal revenue taxes are "liquors, distilled," "liquors, malt," "tobacco manufactures," "oleomargarine," and "butter, reworking." While the cost of the products of these industries to the public ordinarily includes the full amount of the Federal tax, from the standpoint of the consumption of materials and the employment of labor the importance of these industries can not be judged properly from either the value of products or the value added by manufacture. The taxes imposed in the case of tobacco products, oleomargarine, and reworked or "process" butter are not sufficiently high to make any extraordinary difference between the ranking of the industries producing them according to value of products and value added by manufacture, on the one hand, and their ranking according to number of wage earners on the other. The manufacture of distilled liquors, however, although ranking twenty-sixth among the industries in value of products in 1909 and twelfth in value added by manufacture, ranked one hundred and second in number of wage earners, while the manufacture of malt liquors ranked seventeenth, fifth, and twenty-eighth, respectively.

Comment upon the changes between 1899 and 1909 in the rank of industries, as judged by value of products, must be confined to the larger industries. Among those with products in 1909 valued at more than \$25,000,000, that showing the most conspicuous advance in rank is the automobile industry, which ranked one hundred and fiftieth in value of products in 1899 and twenty-first in 1909. Other industries of this group showing notable advances are the wire and beet sugar industries, smelting and refining other than from the ore, the street-railroad repair shops ("cars and general shop construction and repairs by street-railroad companies"), and the manufactured ice industry. On the other hand, several industries having products valued at more than \$25,000,000 occupied a lower rank as regards value of products in 1909 than 10 years earlier, among these being the smelting and refining of lead, the carriage and wagon and the shipbuilding industries, and the manufacture of carpets and rugs, other than rag, of cordage and twine and jute and linen goods, and of rubber boots and shoes.

Percentages which selected industries contribute to totals for all industries.—It is scarcely worth while to show for every one of the 259 industries for which separate statistics can be given the percentages which its wage earners, value of products, and value added by manufacture form of the totals for these items for all industries combined. For scores of industries the proportions would be less than one-tenth of 1 per cent. The following table therefore relates only to selected

industries. It includes every industry which in 1909 reported 1 per cent or more of the total value of products, or of the total value added by manufacture, or of the total number of wage earners. In some cases an industry which reported more than 1 per cent of one of these items reported less than 1 per cent of one of the other items, this being notably the case with the sugar, petroleum, and distillery industries, which gave employment to very small proportions of the total number of wage earners in manufacturing industries in 1909. The industries in the table are listed in the order of their gross value of products.

1909. It may be noted that it has been necessary in this diagram to abbreviate some of the industry designations.

PERCENTAGE OF TOTAL VALUE OF PRODUCTS REPORTED FOR LEADING INDUSTRIES: 1909.

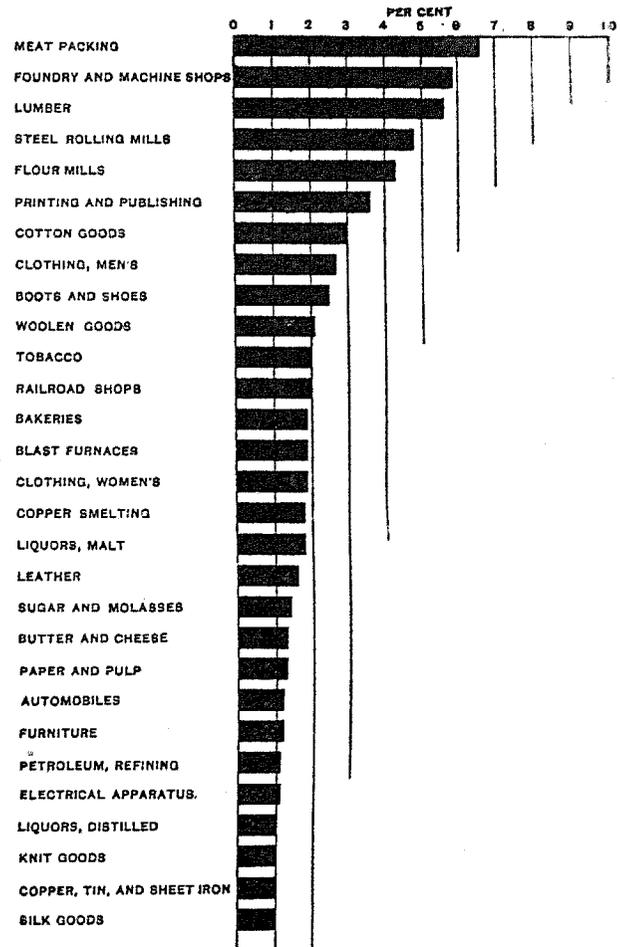


Table 3

INDUSTRY.	PER CENT OF TOTAL: 1909		
	Wage earners (average number).	Value of products.	Value added by manufacture.
All industries.....	100.0	100.0	100.0
Slaughtering and meat packing.....	1.4	6.6	2.0
Foundry and machine-shop products.....	8.0	5.9	8.1
Lumber and timber products.....	10.5	5.6	7.6
Iron and steel, steel works and rolling mills.....	3.6	4.8	3.8
Flour-mill and gristmill products.....	0.6	4.3	1.4
Printing and publishing.....	3.9	3.6	6.3
Cotton goods, including cotton small wares.....	5.7	3.0	3.0
Clothing, men's, including shirts.....	3.6	2.7	3.2
Boots and shoes, including cut stock and findings.....	3.0	2.5	2.1
Woolen, worsted, and felt goods, and wool hats.....	2.6	2.1	1.8
Tobacco manufactures.....	2.5	2.0	2.8
Cars and general shop construction and repairs by steam-railroad companies.....	4.3	2.0	2.4
Bread and other bakery products.....	1.5	1.9	1.9
Iron and steel, blast furnaces.....	0.6	1.9	0.8
Clothing, women's.....	2.3	1.9	2.1
Smelting and refining, copper.....	0.2	1.8	0.5
Liquors, malt.....	0.8	1.8	3.3
Leather, tanned, curried, and finished.....	0.9	1.6	0.9
Sugar, refining, not including beet sugar.....	0.2	1.4	0.4
Butter, cheese, and condensed milk.....	0.3	1.3	0.5
Paper and wood pulp.....	1.1	1.3	1.2
Automobiles, including bodies and parts.....	1.1	1.2	1.4
Furniture and refrigerators.....	1.9	1.2	1.5
Petroleum, refining.....	0.2	1.1	0.4
Electrical machinery, apparatus, and supplies.....	1.3	1.1	1.3
Liquors, distilled.....	0.1	1.0	2.0
Hosiery and knit goods.....	2.0	1.0	1.1
Copper, tin, and sheet-iron products.....	1.1	1.0	1.0
Silk and silk goods, including throwsters.....	1.5	1.0	1.0
Gas, illuminating and heating.....	0.6	0.8	1.3
Carriages and wagons and materials.....	1.1	0.8	0.9
Agricultural implements.....	0.8	0.7	1.0
Patent medicines and compounds and druggists' preparations.....	0.3	0.7	1.1
Marble and stone work.....	1.0	0.5	0.9
Brick and tile.....	1.2	0.4	0.8
Glass.....	1.0	0.4	0.7

Relative growth of industries: 1899-1909.—Table 1 shows for each of the 259 industries for which separate statistics can be shown, so far as comparable figures for the three censuses are available, the percentages of increase in the number of wage earners, value of products, and value added by manufacture between 1899 and 1909, and also for the periods 1899-1904 and 1904-1909. Nearly all of the industries show more or less increase in each of these items for the decade and for each of the five-year periods, and in most cases the increases have been large, particularly in value of products. It is impossible to comment upon any considerable proportion of the 259 industries listed in the table. For convenience, the discussion is confined chiefly to the 48 industries which in 1909 had products valued at \$100,000,000 or over. The absolute amounts of the increase for the decade, as well as the percentages, are significant in the case of these large industries. Table 4, therefore, shows both absolute and relative increases, as well as the number of wage earners, value of products, and value added by manufacture for each industry for 1909 and 1899.

A considerable disparity, for reasons already indicated, often appears between the percentages in the different columns. For example, the slaughtering and meat-packing industry, while it contributed 6.6 per cent of the total value of manufactured products in 1909, gave employment to only 1.4 per cent of the total number of wage earners in manufacturing industries and contributed only 2 per cent of the total value added by manufacture, while, on the other hand, the lumber industry employed a much larger proportion of the total number of wage earners than it contributed to the total value of products.

The following diagram shows graphically the percentage of the total value of products for all industries combined reported for the leading industries in

MANUFACTURES.

INCREASE IN WAGE EARNERS, VALUE OF PRODUCTS AND VALUE ADDED BY MANUFACTURE FOR LEADING INDUSTRIES: 1899 TO 1909.

NOTE.—The figures for the following industries given in this table do not agree with those in other tables, because a combination of industries and other adjustments were necessary in order to make the totals for the two censuses more exactly comparable:
 Chemicals.—The totals for 1909 include the figures for "sulphuric, nitric, and mixed acids" and "wood distillation, not including turpentine and rosin," which are shown as separate industries in other tables. These industries were included with "chemicals" in 1899.
 Coffee and spice, roasting and grinding.—The totals for 1909 include the figures for "peanuts, grading, roasting, cleaning, and shelling," which is shown as a separate industry in other tables. This industry was included with "coffee and spice, roasting and grinding," in 1899.
 Foundry and machine-shop products.—The totals for 1909 include the figures for "stoves and furnaces, including gas and oil stoves" and "locomotives, not made by railroad companies," which are shown as separate industries in other tables. These industries were included with "foundry and machine-shop products" in 1899.
 Marble and stone work.—The totals for 1909 include the figures for "artificial stone," which is shown as a separate industry in other tables. This industry was included with "marble and stone work" in 1899.
 Soap.—The totals for 1909 include the figures for "candles," which is shown as a separate industry in other tables. This industry was included with "soap" in 1899.
 Sugar and molasses, not including beet sugar.—The totals for 1909 include the figures for "sugar, refining, not including beet sugar" and "sugar and molasses," which are shown as separate industries in most of the other tables. These industries were not reported separately in 1899.

INDUSTRY.	WAGE EARNERS (AVERAGE NUMBER).				VALUE OF PRODUCTS.				VALUE ADDED BY MANUFACTURE.			
	1909	1899	Increase. ¹		1909	1899	Increase. ¹		1909	1899	Increase. ¹	
			Num-ber.	Per cent.			Amount.	Per cent.			Amount.	Per cent.
All industries	6,615,046	4,712,783	1,902,263	40.4	\$20,672,051,870	\$11,406,926,701	\$9,265,125,169	81.2	\$3,529,260,992	\$4,831,075,210	\$3,698,185,782	76.5
Agricultural implements.....	50,551	46,582	3,969	8.5	146,329,268	101,207,428	45,121,840	44.6	86,022,749	57,262,800	28,759,949	50.2
Automobiles, including bodies and parts.....	75,721	2,241	73,480	3,278.9	249,202,075	4,748,011	244,454,064	5,148.6	117,556,339	2,943,724	114,612,615	3,893.1
Boots and shoes, including cutstock and findings.....	198,297	151,231	47,066	31.1	512,797,642	290,047,087	222,750,555	76.8	180,059,429	98,591,560	81,467,869	82.6
Brass and bronze products.....	40,618	27,166	13,452	49.5	149,989,058	88,653,987	61,335,071	69.2	50,760,646	27,464,863	23,295,783	84.8
Bread and other bakery products.....	100,216	60,192	40,024	66.5	396,804,844	175,368,682	221,496,162	126.3	158,831,181	80,316,730	78,514,451	97.8
Butter, cheese, and condensed milk. Canning and preserving.....	15,431	12,799	2,632	44.0	274,557,718	130,783,349	143,774,369	109.9	39,011,654	21,942,149	17,069,505	77.8
Carriages and wagons and materials. Cars and general shop construction and repairs by steam-railroad companies.....	59,968	57,012	2,956	5.2	157,101,201	99,335,464	57,765,737	58.2	55,278,142	35,667,896	19,610,246	55.0
Cars, steam-railroad, not including operations of railroad companies.....	69,928	73,812	-3,884	-5.3	159,692,547	138,261,763	21,630,784	15.6	77,941,259	71,489,844	6,451,415	9.0
Chemicals.....	282,174	173,595	108,579	62.5	405,600,727	218,113,658	187,487,069	86.0	206,187,315	108,041,305	97,546,010	80.8
Clothing, men's, including shirts.....	43,096	33,453	9,643	28.8	123,729,627	90,510,180	33,219,447	36.7	44,976,766	28,707,433	16,269,333	56.3
Clothing, women's.....	19,020	9,667	9,353	50.8	137,309,942	62,637,068	74,672,874	119.2	61,926,727	28,091,140	33,835,587	120.4
Coffee and spice, roasting and grinding.....	229,696	157,549	82,147	52.1	598,076,635	323,838,887	274,237,748	75.4	270,561,189	155,669,525	114,891,664	73.8
Confectionery.....	153,743	83,739	70,004	83.6	384,751,649	159,339,539	225,412,110	141.5	175,963,423	74,034,947	101,928,476	135.8
Copper, tin, and sheet-iron products.....	28,687	19,020	9,667	50.8	120,260,338	69,527,106	50,742,230	73.0	28,452,176	14,414,905	14,037,271	97.4
Cotton goods, including cotton small wares.....	229,696	157,549	82,147	52.1	134,795,913	60,643,946	74,151,967	122.3	53,645,140	25,289,738	28,355,402	112.1
Electrical machinery, apparatus, and supplies.....	73,615	38,317	35,298	92.1	199,824,218	78,359,069	121,465,149	155.0	87,241,945	35,757,319	51,484,626	144.0
Fertilizers.....	378,880	302,861	76,019	25.1	628,391,813	339,200,320	289,191,493	85.3	257,382,343	162,648,793	94,733,550	58.2
Flour-mill and gristmill products.....	87,256	42,013	45,243	107.7	221,308,563	92,434,435	128,874,128	139.4	112,742,159	42,976,163	69,765,996	162.3
Food preparations.....	18,310	11,581	6,729	58.1	103,960,213	44,657,385	59,302,828	132.8	34,438,293	15,698,525	18,739,768	119.4
Foundry and machine-shop products.....	39,453	32,226	7,227	22.4	883,584,405	501,396,304	382,188,101	76.2	116,007,926	73,279,547	42,728,379	58.3
Furniture and refrigerators.....	14,968	8,214	6,754	82.2	125,331,181	39,836,882	85,494,299	214.6	41,389,032	15,060,257	26,328,775	174.8
Gas, illuminating and heating.....	583,650	426,985	156,665	26.6	1,338,910,773	798,454,071	540,456,702	67.7	754,501,390	435,418,012	319,083,378	73.3
Hosiery and knit goods.....	128,452	90,591	37,861	41.8	130,633,872	109,252,634	21,381,238	83.6	131,111,604	73,227,723	57,883,881	78.0
Iron and steel, blast furnaces.....	37,215	22,459	14,756	65.7	166,814,371	75,716,693	91,097,678	120.3	114,386,527	55,111,337	59,275,190	107.0
Iron and steel, steel works and rolling mills.....	129,275	87,691	41,584	54.5	200,143,827	95,323,662	104,820,165	108.8	89,902,474	44,638,362	45,264,112	101.4
Leather goods.....	38,429	39,241	-812	-2.1	301,429,283	206,756,557	184,672,726	89.3	70,791,394	75,262,902	-4,461,508	-5.9
Leather, tanned, curried, and finished.....	240,076	183,249	56,827	31.0	985,722,534	597,211,716	388,510,818	65.1	328,221,678	206,816,439	121,405,239	59.1
Liquors, distilled.....	34,967	29,274	5,693	19.2	104,719,008	60,414,008	44,305,000	73.3	44,692,240	27,219,432	17,472,808	64.2
Liquors, malt.....	62,202	52,109	10,093	19.4	327,874,187	204,038,127	123,836,060	60.7	79,595,254	49,038,123	30,557,131	62.3
Lumber and timber products.....	6,439	3,720	2,719	72.8	204,699,412	96,793,681	107,905,731	111.5	168,722,519	81,648,818	87,073,701	106.0
Marble and stone work.....	54,579	39,459	15,120	38.3	374,730,090	236,914,914	137,815,182	58.2	278,134,460	185,316,667	92,817,793	50.1
Oil, cottonseed, and cake.....	685,019	598,766	86,253	14.4	1,156,128,747	760,992,360	395,136,387	51.9	648,011,168	306,028,519	342,982,649	103.5
Paint and varnish.....	41,686	33,874	7,812	23.1	131,688,555	63,667,234	68,021,421	106.8	87,248,579	42,121,424	45,127,155	107.1
Paper and wood pulp.....	75,500	41,686	33,814	81.1	58,726,632	28,141,262	30,585,370	151.8	28,034,419	13,560,809	14,473,610	106.7
Patent medicines and compounds and druggists' preparations.....	17,671	11,007	6,664	46.8	124,889,422	69,562,235	55,327,187	79.5	45,873,867	24,832,718	21,041,149	84.8
Petroleum, refining.....	14,240	9,897	4,343	43.9	267,656,964	127,326,162	140,330,802	110.2	102,214,623	56,795,926	45,418,697	80.0
Printing and publishing.....	75,978	49,646	26,332	33.0	141,941,602	88,790,774	53,150,828	59.9	91,565,937	56,840,884	34,725,053	61.1
Rubber goods, not elsewhere specified.....	22,965	19,028	3,937	20.7	236,997,659	123,929,384	113,068,275	91.2	37,724,257	21,070,043	16,654,214	79.0
Silk and silk goods, including throwsters.....	13,929	12,199	1,730	14.2	737,876,087	395,186,629	342,689,458	86.7	536,101,497	291,532,345	244,569,152	83.9
Slaughtering and meat packing.....	258,434	195,290	63,144	32.4	128,435,747	52,621,830	75,813,917	144.1	46,243,926	19,139,516	27,104,410	141.6
Smelting and refining, copper.....	26,521	20,404	6,117	30.0	196,911,667	107,256,258	89,655,409	83.6	89,144,751	44,849,593	44,295,158	98.8
Smelting and refining, lead.....	99,037	65,416	33,621	51.4	1,370,568,101	788,367,647	582,200,454	73.8	167,740,317	103,057,548	64,682,769	62.8
Soap and molasses, not including beet sugar.....	89,728	69,264	20,464	29.5	378,805,974	165,131,670	213,674,304	129.4	45,274,336	42,967,541	2,316,795	5.4
Tobacco manufactures.....	15,628	11,324	4,304	38.0	167,405,630	175,466,304	-8,060,674	-4.6	15,442,628	31,271,141	-15,828,513	-60.6
Woolen, worsted, and felt goods, and wool hats.....	7,424	8,319	-895	-10.8	114,488,298	53,231,017	61,257,281	115.1	40,132,778	20,087,787	20,044,991	99.8
All other industries.....	13,538	9,487	4,051	42.7	279,249,397	239,711,011	39,538,386	16.5	31,666,593	18,326,242	13,340,351	72.8
	186,810	132,526	54,284	25.9	416,695,104	263,713,173	152,981,931	58.6	239,509,483	170,846,631	68,662,852	40.2
	168,722	139,607	29,115	17.3	435,978,558	248,798,133	187,180,425	75.2	153,100,519	94,867,725	58,232,794	61.4
	1,498,696	1,066,274	432,422	40.6	3,819,868,070	2,012,780,425	1,807,087,645	89.8	1,807,795,881	973,101,147	834,694,734	85.8

¹ A minus sign (-) denotes decrease.
² Includes for 1909 some establishments which were included under "enameling and japanning" in 1899.
³ Includes for 1909 establishments compounding table sirups which were included under "sugar and molasses" in 1899.
⁴ Includes for 1909 some establishments included under "furnishing goods, men's," in 1909.

Among the 48 industries covered by Table 4 there was only one, the smelting and refining of lead, which showed a decrease in value of products between 1899 and 1909, and this decrease was in reality only apparent, being due to a change in the method of accounting in certain establishments (see Chapter V, p. 87). This industry and "iron and steel, blast furnaces," are the only ones which show a decrease for the decade in value added by manufacture. The two industries just mentioned and also the manufacture of carriages and wagons and materials and of sugar and molasses, not including beet sugar, show a decrease in the average number of wage earners employed.

Of the 48 industries for which statistics are presented in Table 4, the manufacture of automobiles shows by far the highest percentages of increase for the decade. The value of products of this industry in 1909 was more than fifty times as great as in 1899. Other industries in this group which show notable relative increases during the decade are the following: "Oil, cottonseed, and cake;" "food preparations;" "rubber goods, not elsewhere specified;" "copper, tin, and sheet-iron products;" "clothing, women's;" "electrical machinery, apparatus, and supplies;" "fertilizers;" and "smelting and refining, copper."

The greatest absolute increase in number of wage earners between 1899 and 1909 was in the lumber industry, but in value of products the increase in this industry was exceeded by that in the slaughtering and meat-packing and in the foundry and machine-shop industries. In absolute increase in value added by manufacture, the foundry and machine-shop industry ranked first, followed by the lumber and the printing and publishing industries.

In 19 of the 48 industries the percentages of increase in the number of wage earners, value of products, and value added by manufacture for the five-year period 1904-1909 were greater than for the five-year period 1899-1904. For 9 industries, on the other hand, the percentages of increase in all three items were less during the later five-year period than during the earlier, the flour-mill and gristmill, steam-railroad repair shop, bakery, and paper and wood pulp industries being the most important of these industries.

Relation of cost of materials and value added by manufacture to value of products.—Attention has repeatedly been called to the fact that industries often have a very different rank with respect to value of products from that which they occupy with respect to value added by manufacture. It is evident that while, from the standpoint of the purchasing public, the relative importance of an industry is best judged by value of products, yet the importance of a given manufacturing industry, as such, in contributing to the production of wealth, can better be judged from the value added by manufacture. In order to bring

out the wide differences among industries with respect to the ratio between the value added by manufacture and the value of products, a column has been included in Table 2, on page 45, showing that ratio for each of the 259 industries.

For certain purposes, however, it is more convenient to refer to the ratio which the cost of materials bears to the value of products (which is simply the complement of the ratio of value added by manufacture to value of products). The most significant cases are of course the extreme cases.

The following table shows all the industries presented in Table 2 in which the cost of materials represented less than 30 per cent of the value of products—or, what is the same thing, in which the value added by manufacture was more than 70 per cent of the value of products. The value of products is also given in each case, as an index to the relative importance of the industries.

INDUSTRY.	Value of products.	Ratio of cost of materials to value of products (per cent).
Cloth, sponging and refinishing.....	\$1,543,572	5.5
Clothing, men's, buttonholes.....	780,720	13.4
Cash registers and calculating machines.....	23,708,326	15.0
Engraving and diesinking.....	2,249,861	15.6
Pens, steel.....	576,696	16.5
Liquors, distilled.....	204,699,412	17.6
Engraving, wood.....	711,279	17.7
Photo-engraving.....	11,624,900	18.4
Turpentine and rosin.....	25,295,917	19.4
Statuary and art goods.....	3,441,546	19.8
Typewriters and supplies.....	19,718,767	20.7
Rules, ivory and wood.....	143,811	21.4
Paper patterns.....	2,610,714	24.7
Brick and tile.....	92,776,504	25.6
Liquors, malt.....	374,730,096	25.8
Ice, manufactured.....	42,953,655	26.3
Phonographs and graphophones.....	11,725,996	26.4
Electroplating.....	4,509,559	26.7
Carpets, rag.....	2,567,569	26.8
Carpets, wool.....	737,876,087	27.3
Printing and publishing.....	3,228,108	27.6
Musical instruments and materials, not specified.....	6,383,694	27.7
Stereotyping and electrotyping.....	1,688,171	27.7
Grindstones.....	10,503,601	27.8
Instruments, professional and scientific.....	5,691,203	28.0
Files.....	76,118,861	28.8
Pottery, terra-cotta, and fire-clay products.....	22,561,341	29.7
Photographic apparatus and materials.....		

Most of the industries in this group are those turning out highly elaborated products in the manufacture of which much skilled labor is required, or at least products which are highly elaborated as compared with the raw materials used; for there are a few industries with relatively simple products where the low ratio between cost of materials and value of products is due to the fact that the chief materials can be had for little or nothing in the way of direct expenditure. Important examples of this latter type are the turpentine and rosin industry, in which the process of manufacture starts with the tree standing in the forest, and the manufacture of brick and tile, of pottery, terra-cotta, and fire-clay products, and of grindstones, in which the chief materials are clay, sand, and stone. In printing and publishing, the most important of the industries included in the table, the products are highly elabo-

rated, and in addition a considerable part of the total value of products is contributed by receipts from advertising. In the sponging and refinishing of cloth and the making of buttonholes and rag carpets the work is done largely on materials furnished by others, so that the cost of the materials actually purchased by the establishment bears no definite relation to the value of products reported, especially as the latter consists mainly of the amounts received for custom work and does not represent the full value of the carpets made. In the distillery industry the low ratio of cost of materials to value of products is due entirely to the inclusion of the internal revenue tax as a part of the value of products. This tax is likewise largely responsible for the low ratio in the case of the brewery industry ("liquors, malt").

The following table shows all the industries presented in Table 2 in which the cost of materials constituted 75 per cent or more of the value of products:

INDUSTRY.	Value of products.	Ratio of cost of materials to value of products (per cent).
Lard, refined, not made in slaughtering and meat-packing establishments.....	\$10,326,471	93.3
Gold and silver, reducing and refining, not from the ore.....	23,611,764	93.1
Sugar, refining, not including beet sugar.....	248,628,659	91.0
Smelting and refining, lead.....	167,405,650	90.8
Butter, reworking.....	8,200,533	90.5
Peanuts, grading, roasting, cleaning, and shelling.....	9,736,551	88.5
Smelting and refining, copper.....	378,805,974	88.0
Slaughtering and meat packing.....	1,370,568,101	87.8
Tin plate and ternaplate.....	47,969,645	87.3
Rice, cleaning and polishing.....	22,371,457	87.2
Flour-mill and gristmill products.....	883,584,406	86.9
Butter, cheese, and condensed milk.....	274,657,718	85.8
Bags, other than paper.....	54,881,622	84.5
Oil, linseed.....	36,738,694	84.5
Petroleum, refining.....	236,997,659	84.1
Smelting and refining, not from the ore.....	28,072,041	82.5
Babbitt metal and solder.....	19,767,935	82.3
Iron and steel, blast furnaces.....	391,429,283	81.9
Lead, bar, pipe, and sheet.....	9,144,930	81.0
Oil, cottonseed, and cake.....	147,867,894	81.0
Oleomargarine.....	8,147,629	79.7
Malt.....	38,252,233	79.6
Wool pulling.....	5,180,856	79.2
Galvanizing.....	7,338,330	77.9
Waste.....	11,398,011	77.5
Leather, tanned, curried, and finished.....	327,874,187	75.7
Glucose and starch.....	48,799,311	75.6
Coffee and spice, roasting and grinding.....	110,532,787	75.3

This group of industries consists chiefly of those in which the processes of manufacture are very simple and effect comparatively little change in the materials. In the slaughtering and meat-packing and the leather industries, the processes used for elaborating some of the products are far from simple, but the greater part of the products, both in quantity and in value, are subjected to very little elaboration.

SUMMARY FOR GROUPS OF INDUSTRIES.

Comparative statistics: 1909, 1904, and 1899.—To facilitate the comparison of one broad type of manufacturing with another, the 264 industries distinguished at the census of 1909 have been grouped into 14 gen-

eral classes. Table 7 presents statistics for these classes for the last three censuses.

Any grouping of industries must necessarily be more or less arbitrary and probably no two persons would agree exactly as to the number of groups which should be distinguished or as to the proper assignment of every industry with respect to the groups established. In making up the 14 classes shown in the table, the Census Bureau has followed two principles: (1) that of similarity with respect to character of materials and (2) that of similarity with respect to the use of the finished product. In some cases the actual classification of an industry might be explained by either principle. Thus the industries assigned to the textile group all resemble one another in using as materials fibers of different sorts or the more advanced products derived from those materials; and most of them resemble one another in that the products are designed, directly or indirectly, chiefly for use as clothing. On the other hand, the uses of the products made by the various industries classed under the general designation "iron and steel and their products" are extremely varied, and the group has been constituted solely with respect to the character of the principal materials used.

Several of the industry groups established by the Census Bureau are fairly well defined; that is, they include few industries, if any, which do not clearly fall under the group designation, and at the same time comprise practically all the industries any part of whose products might be described by that designation. This is true, for instance, of the groups designated "food and kindred products," "textiles," "leather and its finished products," "liquors and beverages," and "tobacco manufactures." Some of the other groups, however, are much less sharply marked off. For example, several of the industries placed in the groups designated "metals and metal products other than iron and steel," "vehicles for land transportation," "railroad repair shops," and "miscellaneous industries" are somewhat similar in the methods of manufacture, the materials used, and the uses of the products to some of the industries included in the group designated "iron and steel and their products." The exact composition of each group can be learned by consulting the various tables appearing in Chapter XV of this report which list the industries assigned to each group.

This classification of industries into broad groups was first made in connection with the census of 1899. Some unimportant changes, however, in the grouping of the industries as published for 1904 and 1899, have been necessary in order to make the figures comparable with those for 1909. Substantially the only significant change in the classification adopted at the present census has been to include the shipbuilding industry under the heading of "miscellaneous industries" instead of treating it as one of 15 separate groups.

SUMMARY, BY INDUSTRIES.

SUMMARY FOR 14 GENERAL GROUPS OF INDUSTRIES: 1909, 1904, AND 1899.

Table 7

GROUP.	Year.	Number of establishments.	WAGE EARNERS.		COST OF MATERIALS.		VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.			PER CENT OF INCREASE.		
			Average number.	Per cent of total.	Amount.	Amount.	Per cent of total.	Amount.	Per cent of total.	Per cent value added by manufacture formed of total value of products.	Period.	Wage earners (average number).	Value of products.	Value added by manufacture.	
All industries.....	1909	268,491	6,615,046	160.0	\$12,142,790,878	\$20,672,051,870	100.0	\$8,529,260,992	100.0	41.3	1899-1909	49.0	61.2	76.5	
	1904	216,180	5,468,383	100.0	8,500,207,810	14,793,902,563	100.0	6,293,694,753	100.0	42.5	1904-1909	21.0	39.7	35.5	
	1899	207,514	4,712,763	100.0	6,575,851,491	11,406,926,701	100.0	4,831,075,210	100.0	42.4	1899-1904	16.0	29.7	30.3	
1. Food and kindred products.	1909	55,364	411,575	6.2	3,187,803,080	3,937,617,891	19.0	749,814,811	8.8	19.0	1899-1909	36.3	79.0	80.1	
	1904	45,857	354,046	6.5	2,306,120,760	2,845,555,772	19.2	539,435,012	8.6	19.0	1904-1909	16.2	38.4	39.0	
	1899	41,247	301,868	6.4	1,782,862,809	2,199,203,442	19.3	416,340,633	8.6	18.9	1899-1904	17.3	29.4	29.6	
2. Textiles.....	1909	21,695	1,437,258	21.7	1,741,987,395	3,054,708,084	14.8	1,312,720,689	15.4	43.0	1899-1909	40.6	87.6	79.0	
	1904	17,022	1,155,613	21.1	1,244,864,540	2,144,604,719	14.5	899,749,173	14.3	42.0	1904-1909	24.4	42.4	45.9	
	1899	17,640	1,021,869	21.7	894,394,531	1,627,889,077	14.3	733,494,546	15.2	45.1	1899-1904	13.1	31.7	22.7	
3. Iron and steel and their products.	1909	17,289	1,025,044	15.5	1,802,105,826	3,163,126,293	15.3	1,361,020,467	16.0	43.0	1899-1909	37.8	74.0	66.7	
	1904	14,430	867,390	15.9	1,192,111,689	2,197,773,117	14.9	1,005,661,428	16.0	45.8	1904-1909	15.2	48.9	35.3	
	1899	14,080	744,069	15.8	1,001,781,364	1,818,095,771	15.9	816,314,407	16.9	44.9	1899-1904	16.6	20.9	28.2	
4. Lumber and its remanufactures.	1909	48,533	907,514	13.7	714,573,711	1,582,522,263	7.7	867,948,552	10.2	54.8	1899-1909	35.6	57.5	65.2	
	1904	32,493	729,686	13.3	514,907,696	1,214,476,055	8.2	699,568,359	11.1	57.6	1904-1909	24.4	30.3	24.1	
	1899	34,947	669,043	14.2	479,396,305	1,004,716,682	8.8	525,320,377	10.9	52.3	1899-1904	9.1	20.9	33.2	
5. Leather and its finished products.	1909	5,728	309,766	4.7	669,874,518	992,713,322	4.8	322,838,804	3.8	32.5	1899-1909	24.6	70.6	74.1	
	1904	5,318	264,459	4.8	480,220,706	724,391,050	4.9	244,170,344	3.9	33.7	1904-1909	17.1	37.0	32.2	
	1899	5,625	248,626	5.3	396,633,189	582,047,900	5.1	185,414,711	3.8	31.9	1899-1904	6.4	24.5	31.7	
6. Paper and printing.....	1909	34,828	415,990	6.3	451,238,634	1,179,285,247	5.7	728,046,613	8.5	61.7	1899-1909	39.2	94.0	85.1	
	1904	30,803	351,640	6.4	309,012,305	859,814,263	5.8	550,801,958	8.8	64.1	1904-1909	18.3	37.2	32.2	
	1899	26,627	298,744	6.3	214,565,643	607,907,231	5.3	393,341,588	8.1	64.7	1899-1904	17.7	41.4	46.0	
7. Liquors and beverages.....	1909	7,347	77,827	1.2	186,127,887	488,183,164	3.3	488,183,164	5.7	72.4	1899-1909	41.2	76.1	68.9	
	1904	6,379	65,338	1.3	139,849,038	501,253,855	3.4	361,404,817	5.7	72.1	1904-1909	13.9	34.5	35.1	
	1899	5,740	55,120	1.2	93,815,032	382,898,381	3.4	289,083,349	6.0	75.5	1899-1904	24.0	30.9	25.0	
8. Chemicals and allied products.	1909	11,745	237,988	3.6	867,019,526	1,430,901,954	6.9	563,882,428	6.6	39.4	1899-1909	32.6	97.1	91.6	
	1904	9,548	208,345	3.8	604,034,306	1,023,790,759	6.9	419,756,453	6.7	41.0	1904-1909	14.2	39.8	34.3	
	1899	8,687	179,539	3.8	431,790,578	726,105,558	6.4	294,314,980	6.1	40.5	1899-1904	16.0	41.0	42.6	
9. Stone, clay, and glass products.	1909	16,168	342,827	5.2	183,791,550	531,736,831	2.6	347,945,281	4.1	65.4	1899-1909	48.0	96.5	87.6	
	1904	10,773	285,346	5.2	123,966,911	391,147,449	2.6	268,080,538	4.2	68.5	1904-1909	20.1	35.9	29.8	
	1899	11,524	231,716	4.9	85,137,414	270,650,143	2.4	185,512,729	3.8	68.5	1899-1904	23.1	44.5	44.5	
10. Metals and metal products, other than iron and steel.	1909	8,750	248,785	3.8	891,014,733	1,238,251,401	6.0	347,236,608	4.1	28.0	1899-1909	55.1	79.7	59.8	
	1904	5,843	197,692	3.6	632,385,257	894,282,432	6.0	261,887,175	4.2	29.3	1904-1909	25.5	38.5	32.6	
	1899	4,996	160,422	3.4	471,598,902	688,927,152	6.0	217,328,250	4.5	31.5	1899-1904	23.2	29.8	20.5	
11. Tobacco manufactures.....	1909	15,822	166,810	2.5	177,185,621	416,695,104	2.0	239,509,483	2.8	57.5	1899-1909	25.9	58.0	40.2	
	1904	16,827	159,406	2.9	126,085,608	331,111,181	2.2	205,025,573	3.2	61.9	1904-1909	4.6	25.8	16.8	
	1899	14,959	132,526	2.8	92,866,542	263,713,173	2.3	170,846,631	3.5	64.8	1899-1904	20.3	25.6	20.0	
12. Vehicles for land transportation.	1909	6,562	202,719	3.1	306,536,675	561,736,289	2.7	255,226,614	3.0	45.4	1899-1909	51.7	102.4	105.4	
	1904	6,058	136,625	2.5	177,640,767	320,623,822	2.2	142,983,055	2.3	44.8	1904-1909	48.4	75.2	78.5	
	1899	7,338	133,663	2.8	153,253,973	277,485,366	2.4	124,231,393	2.6	44.6	1899-1904	2.2	15.5	15.1	
13. Railroad repair shops.....	1909	1,686	304,592	4.6	214,581,311	437,583,288	2.1	222,981,977	2.6	51.0	1899-1909	68.6	92.3	96.2	
	1904	1,226	247,922	4.5	156,568,161	323,212,210	2.0	166,644,049	2.6	61.6	1904-1909	22.9	35.4	33.8	
	1899	1,400	180,620	3.8	113,809,097	227,484,469	2.0	113,675,372	2.4	50.0	1899-1904	37.3	42.1	46.6	
14. Miscellaneous industries....	1909	16,974	526,351	8.0	748,950,411	1,470,855,852	7.1	721,905,441	8.5	49.1	1899-1909	48.3	101.6	97.3	
	1904	13,603	441,875	8.1	493,330,060	1,021,865,879	6.9	528,535,819	8.4	51.7	1904-1909	19.1	43.9	36.6	
	1899	12,704	354,938	7.5	363,946,112	729,802,356	6.4	365,856,244	7.6	50.1	1899-1904	24.5	40.0	44.5	

Were it not for the duplication resulting from the use of the products of one establishment or industry as materials for other establishments or industries, the total value of products would indicate fairly well the relative importance of the different groups from the standpoint of the purchasing public. The value of products, however, would not even in that case show the relative importance of the groups from the manufacturing standpoint, because the cost of materials—even of those which are derived from nonmanufacturing industries—constitutes a much larger proportion of the total value of products in some of the groups than in others, as appears from the wide differences in the percentages which the value added by manufacture (that is, value of products less cost of materials) forms of the total value of products for the several groups. Thus in the group designated "food and kindred products" the value added by manufacture in 1909 repre-

sented only 19 per cent of the gross value of products, while in the group designated "stone, clay, and glass products," the corresponding proportion was 65.4 per cent, and in the group designated "paper and printing," 61.7 per cent. The percentage for the group designated "liquors and beverages," although higher than that for any other group, has little significance, since both the total value of products and the value added by manufacture include the heavy internal revenue tax on distilled and malt liquors. The great difference between the importance of the groups as measured by value of products and their importance as measured by value added by manufacture is to some extent apparent from the differences in the percentages of the respective totals reported for the several groups. The statistics for wage earners are, on the whole, the most significant as showing the relative importance of the different groups from the standpoint of manu-

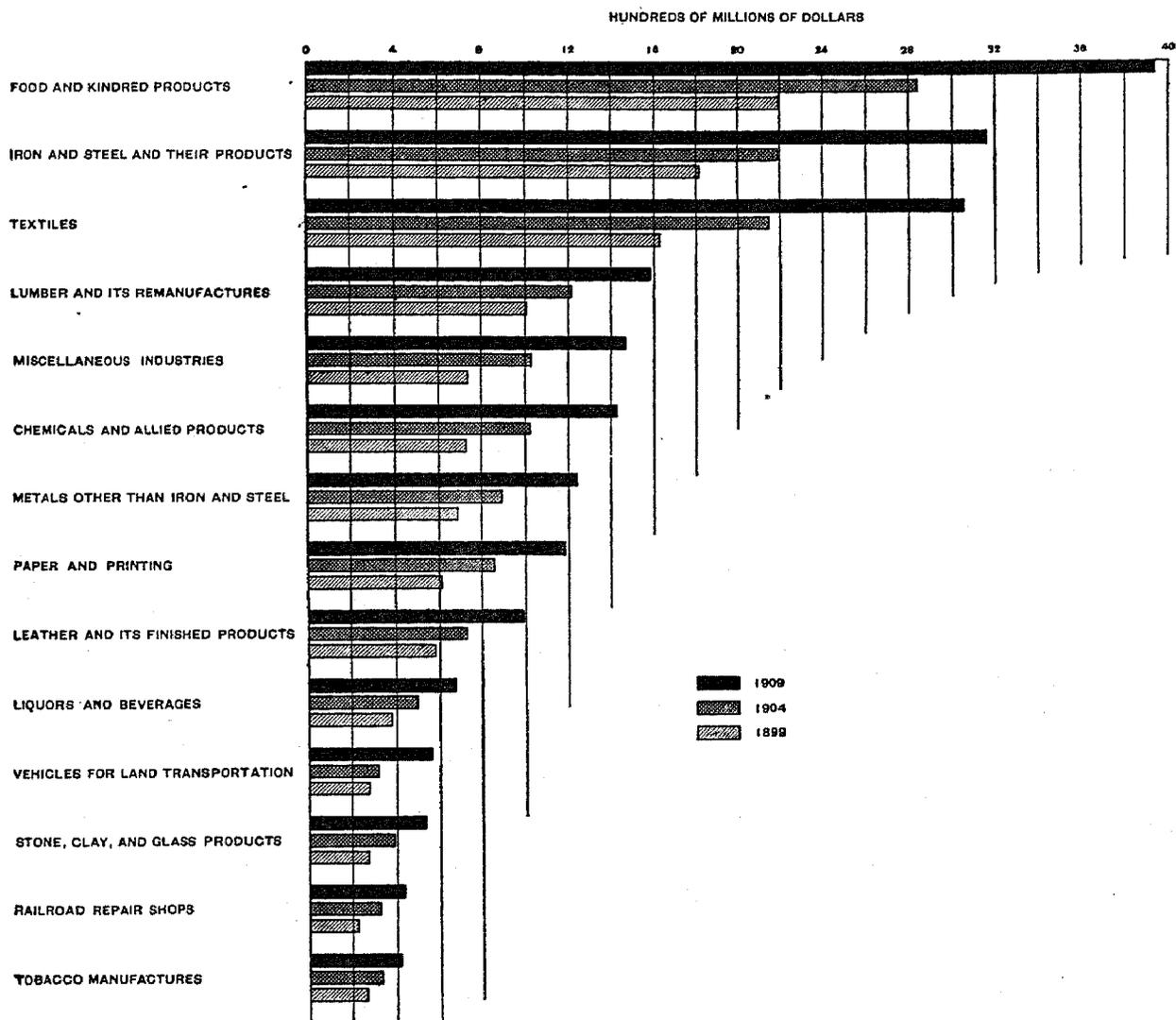
MANUFACTURES.

facturing. The textile group in 1909 gave employment to 21.7 per cent of the total number of wage earners; the group designated "iron and steel and their products," to 15.5 per cent; and the group designated "lumber and its remanufactures," to 13.7 per cent. With respect to the value added by manufacture, the group "iron and steel and their products" was the most important, with 16 per cent of the total for all industries combined. The textile industries followed with 15.4 per cent, and the group designated "lumber and its remanufactures" with 10.2 per cent.

In considering the percentages of increase for the several industry groups in value of products and in

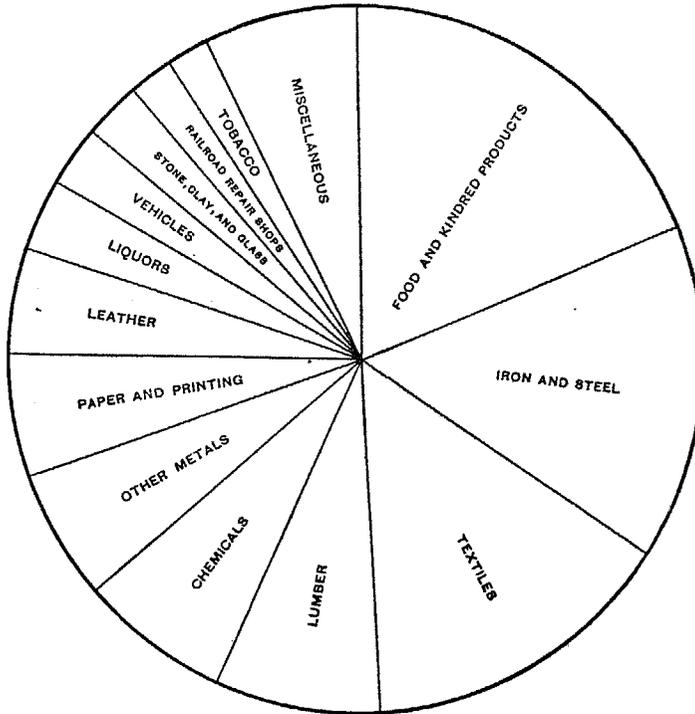
value added by manufacture, it should be borne in mind that there have been considerable differences among different classes of industries in the extent of change in the prices of raw materials and of finished products. With respect to the number of wage earners, the most conspicuous increase between 1899 and 1909 is shown for the railroad repair shops, which employed 68.6 per cent more wage earners in the later year than in the earlier. The groups "metals and metal products, other than iron and steel," and "vehicles for land transportation" also showed increases exceeding 50 per cent in the number of wage earners between 1899 and 1909.

VALUE OF PRODUCTS FOR GROUPS OF INDUSTRIES: 1909, 1904, AND 1899.

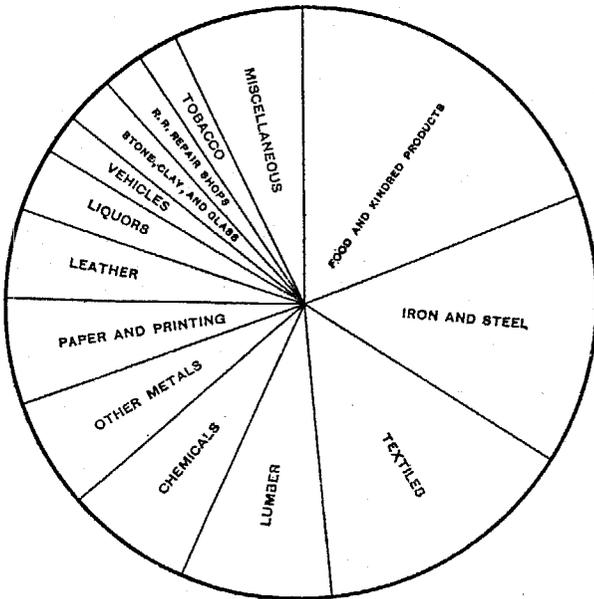


VALUE OF ALL MANUFACTURED PRODUCTS AND PROPORTIONAL VALUE OF EACH GROUP: 1909, 1904, AND 1899.

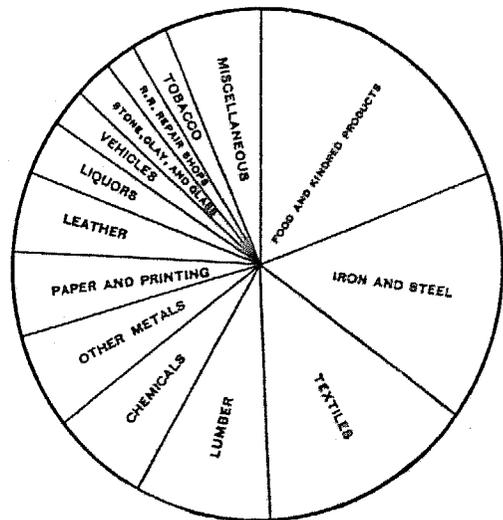
1909



1904



1899



CHAPTER IV.

SUMMARY, BY STATES AND GEOGRAPHIC DIVISIONS.

General Table III presents general totals for all manufacturing industries in each state and geographic division, as reported at the censuses of 1909, 1904, and 1899. More detailed statistics for 1909 are given by states in General Table IV. The more important facts brought out in these larger tables are summarized in the tables and text of this chapter.

Rank of states in manufacturing industries.—Table 1 shows for each state the population and land area in 1910, and the number of industries, number of establishments, average number of wage earners, value of products, and value added by manufacture for all manufacturing industries combined in 1909. The table shows also the value of products and value added by manufacture per capita of the total population, and the ratio that wage earners in manufacturing industries bore to the total population. The distribution of the value of products for all manufacturing industries combined for 1909, by states, is shown graphically by the map on a subsequent page.

Table 1 brings out the well-known fact that there are great differences between different parts of the country with respect to the importance of manufacturing industries. The distribution of such industries is widely different from that of population. In the United States as a whole the value of manufactured products in 1909 was equal to \$225 per capita of the total population (based upon the population census of 1910). In the New England division, however, the value of products per capita was \$408, while in the West South Central division it was only \$71. The state in which the value of manufactured products per capita was highest (\$517) was Rhode Island, while the value per capita was lowest (\$24) in New Mexico.

The table further brings out the fact that the density of population is greatest in those states where manufacturing is most highly developed. There is a rather close parallel between the figures showing the population per square mile and those showing the value of manufactured products per capita.

Table 2 shows, for 1909, 1904, and 1899, the rank of each state with respect to average number of wage earners, value of products, and value added by manufacture, and also the percentage of the United States totals reported from each state. The states are arranged in the order of their rank with respect to value of manufactured products in 1909. The absolute numbers from which the figures in this table are derived are given in General Table III. The two diagrams on subsequent pages also show graphically the value of products and average number of wage earners for each state in 1909 and 1899.

The five leading states in respect to value of manufactured products in 1909 were New York, Pennsylvania, Illinois, Massachusetts, and Ohio. These states

together contained 33.2 per cent, or about one-third, of the total population of the United States in 1910, but reported 51.1 per cent of the total number of wage earners in manufacturing industries in 1909, 52.5 per cent of the value of manufactured products, and 53.8 per cent of the value added by manufacture, or a little more than one-half in each case.

The first seven states in respect to value of products in 1909 were also the first seven in respect to number of wage earners and value added by manufacture. Each of these seven states held the same rank in all three respects except that Illinois, which was third in value of products and value added by manufacture, ranked fourth in number of wage earners, Massachusetts occupying third place. The majority of the other states also held approximately the same rank on each basis, but there are several states whose rank in value of products was materially higher than that in number of wage earners or in value added by manufacture, this being due, in most cases, to the predominance of industries such as the slaughtering and meat-packing, flour-mill and gristmill, and butter, cheese, and condensed-milk industries, in which the cost of materials represents a large proportion of the total value of products. The states showing the greatest variation in this respect are Kansas, Nebraska, Iowa, and Texas.

On the other hand, there are a number of states in which the reverse condition exists, and which held in 1909 a considerably higher rank in number of wage earners than in value of products. This was due largely to the importance in these states of such industries as the manufacture of cotton goods and the lumber industry, in which labor cost accounts for a relatively large proportion of the total value of products. Among such states are North Carolina, South Carolina, Maine, and New Hampshire.

Sixteen states held a higher rank in value of manufactured products in 1909 than in 1899, and 19 a lower rank, while 14 states had the same rank in both years. The most pronounced gains in this respect are shown for Washington, Texas, Mississippi, and North Carolina, and the most conspicuous losses for Maine, Nebraska, Delaware, and New Hampshire. On the basis of average number of wage earners, 15 states gained in rank during the decade and 19 states lost in rank, while 15 states show no change; Louisiana, Washington, Oklahoma, and Idaho made the greatest gain in this respect, while Kentucky and Iowa show the greatest loss. In respect to value added by manufacture 17 states show a gain in rank during the decade, 20 a loss, and 12 no change; the states making the greatest gains were Washington, Idaho, Louisiana, North Carolina, Oregon, Texas, and West Virginia, while those suffering the greatest losses were New Hampshire, Maine, Nebraska, Vermont, and Montana.

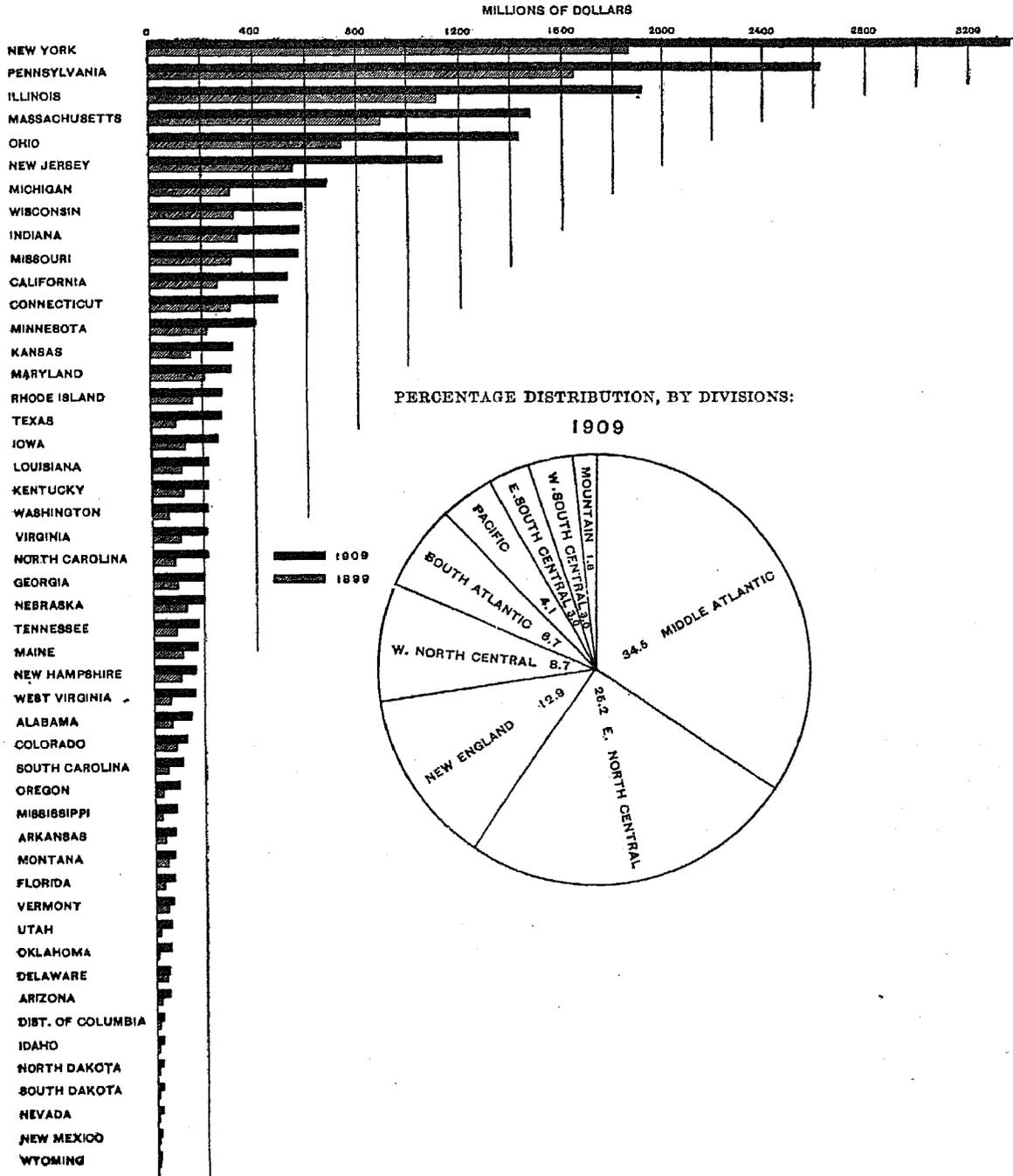
SUMMARY, BY STATES AND DIVISIONS.

Table 1

DIVISION AND STATE.	Population: 1910	Land area (square miles): 1910	Population per square mile: 1910	MANUFACTURING INDUSTRIES: 1909					PER CAPITA OF TOTAL POPULATION.		Ratio of average number of wage earners to total population (per cent).
				Number of industries reported.	Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Value of products.	Value added by manufacture.	
United States	91,972,266	2,973,890	30.9	264	268,491	6,615,046	\$20,672,651,870	\$8,529,260,992	\$225	\$93	7.2
GEOGRAPHIC DIVISIONS:											
New England	6,552,681	61,976	105.7	25	25,351	1,101,290	2,670,065,114	1,193,768,236	408	182	16.8
Middle Atlantic	19,315,892	100,000	193.2	81	81,315	2,207,747	7,141,761,302	2,982,263,573	370	154	11.4
East North Central	18,250,621	245,564	74.3	60	60,013	1,513,764	5,211,702,164	2,177,230,169	256	119	8.3
West North Central	11,637,921	510,804	22.8	27	27,171	374,337	1,803,898,550	562,043,447	155	48	3.2
South Atlantic	12,194,895	269,071	45.3	23	23,088	663,015	1,381,186,210	591,181,848	113	48	5.4
East South Central	8,409,901	179,509	46.8	15	15,381	261,772	630,488,093	294,324,842	75	35	3.1
West South Central	8,784,534	429,740	20.4	12	12,339	204,520	625,443,045	243,311,949	71	26	2.3
Mountain	2,633,517	859,125	3.1	5	5,254	75,435	363,995,598	135,303,366	138	51	2.9
Pacific	4,192,304	318,095	13.2	13	13,579	213,166	843,511,794	349,833,562	201	83	5.1
NEW ENGLAND:											
Maine	742,371	29,895	24.8	126	3,546	79,955	176,029,393	78,928,169	237	106	10.8
New Hampshire	430,572	9,031	47.7	104	1,961	78,658	164,581,019	66,424,003	322	154	15.3
Vermont	355,956	9,124	39.0	84	1,958	33,788	68,309,824	33,457,096	192	94	9.5
Massachusetts	3,866,416	8,039	418.8	223	11,684	584,559	1,490,629,386	659,764,443	443	196	17.4
Rhode Island	542,610	1,067	508.5	135	1,951	113,638	280,343,797	122,182,223	517	225	20.9
Connecticut	1,114,766	4,820	231.3	188	4,251	210,792	490,271,695	233,012,302	440	209	18.9
MIDDLE ATLANTIC:											
New York	9,113,614	47,654	191.2	243	44,935	1,003,981	3,369,490,192	1,512,585,550	370	166	11.0
New Jersey	2,537,167	7,514	337.7	231	8,817	326,223	1,145,529,076	425,496,677	451	168	12.9
Pennsylvania	7,665,111	44,832	171.0	245	27,563	877,543	2,626,742,034	1,044,182,046	343	136	11.4
EAST NORTH CENTRAL:											
Ohio	4,767,121	40,740	117.0	218	15,138	446,934	1,437,935,817	613,733,570	302	129	9.4
Indiana	2,700,876	36,045	74.9	178	7,969	186,984	579,075,046	244,700,293	214	91	6.9
Illinois	5,638,591	56,043	100.6	234	18,026	465,764	1,919,276,594	758,349,904	340	134	8.3
Michigan	2,810,173	57,480	48.9	200	9,169	231,499	685,109,169	316,497,147	244	113	8.2
Wisconsin	2,333,860	55,256	42.2	190	9,721	182,583	590,305,538	243,948,955	253	105	7.8
WEST NORTH CENTRAL:											
Minnesota	2,075,708	80,858	25.7	158	5,561	84,767	409,419,621	127,797,334	197	62	4.1
Iowa	2,224,771	55,586	40.0	133	5,528	61,635	259,237,637	88,530,589	117	40	2.8
Missouri	3,293,335	68,727	47.9	195	8,375	152,993	574,111,070	219,699,919	174	67	4.6
North Dakota	577,056	70,183	8.2	36	752	2,789	19,137,506	5,463,916	33	9	0.5
South Dakota	583,888	76,868	7.6	46	1,020	3,602	17,570,135	6,393,785	31	11	0.6
Nebraska	1,192,214	76,808	15.5	105	2,500	24,336	199,018,579	47,987,608	167	40	2.0
Kansas	1,690,949	81,774	20.7	104	3,435	44,215	325,104,002	66,220,296	192	39	2.6
SOUTH ATLANTIC:											
Delaware	202,322	1,965	103.0	83	726	21,238	52,539,619	21,901,618	281	108	10.5
Maryland	1,295,346	9,941	130.3	170	4,837	107,921	315,669,150	116,620,245	244	90	8.3
District of Columbia	331,069	0	5,517.8	74	518	7,707	25,289,136	15,042,602	76	45	2.3
Virginia	2,061,612	40,262	51.2	130	5,685	105,676	219,793,858	94,211,171	107	46	5.1
West Virginia	1,221,119	24,022	50.8	90	2,566	63,893	161,949,526	69,071,538	133	57	5.2
North Carolina	2,206,287	48,740	45.3	84	4,931	121,473	216,656,055	94,794,525	96	43	5.5
South Carolina	1,515,400	30,495	49.7	69	1,854	73,046	113,235,945	46,885,071	75	31	4.8
Georgia	2,609,121	53,725	44.4	122	4,792	104,568	202,863,262	85,893,498	78	33	4.0
Florida	752,619	54,861	13.7	56	2,159	57,473	72,889,659	46,761,380	97	62	7.6
EAST SOUTH CENTRAL:											
Kentucky	2,289,905	40,181	57.0	133	4,776	65,400	223,754,497	111,975,180	98	49	2.9
Tennessee	2,184,789	41,687	52.4	118	4,609	73,840	180,216,548	76,200,714	82	35	3.4
Alabama	2,138,093	51,279	41.7	88	3,398	72,148	145,961,638	62,519,120	68	29	3.4
Mississippi	1,797,114	46,362	38.8	49	2,568	50,384	80,555,410	43,629,828	45	24	2.8
WEST SOUTH CENTRAL:											
Arkansas	1,574,449	52,525	30.0	72	2,925	44,982	74,016,367	39,981,455	48	25	2.9
Louisiana	1,656,388	45,409	36.5	106	2,516	76,165	223,948,638	89,063,863	135	54	4.6
Oklahoma	1,657,155	69,414	23.9	73	2,310	13,143	53,682,465	19,529,511	32	12	0.8
Texas	3,896,542	262,398	14.8	120	4,588	70,230	272,895,635	94,717,120	70	24	1.8
MOUNTAIN:											
Montana	376,053	146,201	2.6	47	677	11,655	73,271,793	24,091,554	195	64	3.1
Idaho	325,594	83,354	3.9	43	725	8,220	22,399,560	12,479,843	69	38	2.5
Wyoming	145,965	97,594	1.5	23	268	2,867	6,249,078	3,640,889	43	25	2.0
Colorado	799,024	103,658	7.7	124	2,034	28,067	130,044,312	49,553,408	163	62	3.5
New Mexico	327,301	122,503	2.7	28	313	4,143	7,897,756	4,636,713	24	14	1.3
Arizona	204,354	113,810	1.8	34	311	6,441	50,256,694	16,656,454	246	82	3.2
Utah	373,351	82,184	4.5	76	749	11,785	61,989,277	20,723,616	166	56	3.2
Nevada	81,875	109,821	0.7	27	177	2,257	11,886,828	3,530,889	145	43	2.8
PACIFIC:											
Washington	1,141,990	66,836	17.1	127	3,674	69,120	220,746,421	102,856,733	193	90	6.1
Oregon	672,765	95,607	7.0	112	2,246	28,750	93,004,845	42,452,375	138	63	4.3
California	2,377,549	155,652	15.3	185	7,659	115,296	529,760,528	204,522,454	223	86	4.8

MANUFACTURES.

VALUE OF PRODUCTS OF MANUFACTURING INDUSTRIES, BY STATES: 1909 AND 1899.



AVERAGE NUMBER OF WAGE EARNERS, BY STATES: 1909 AND 1899.

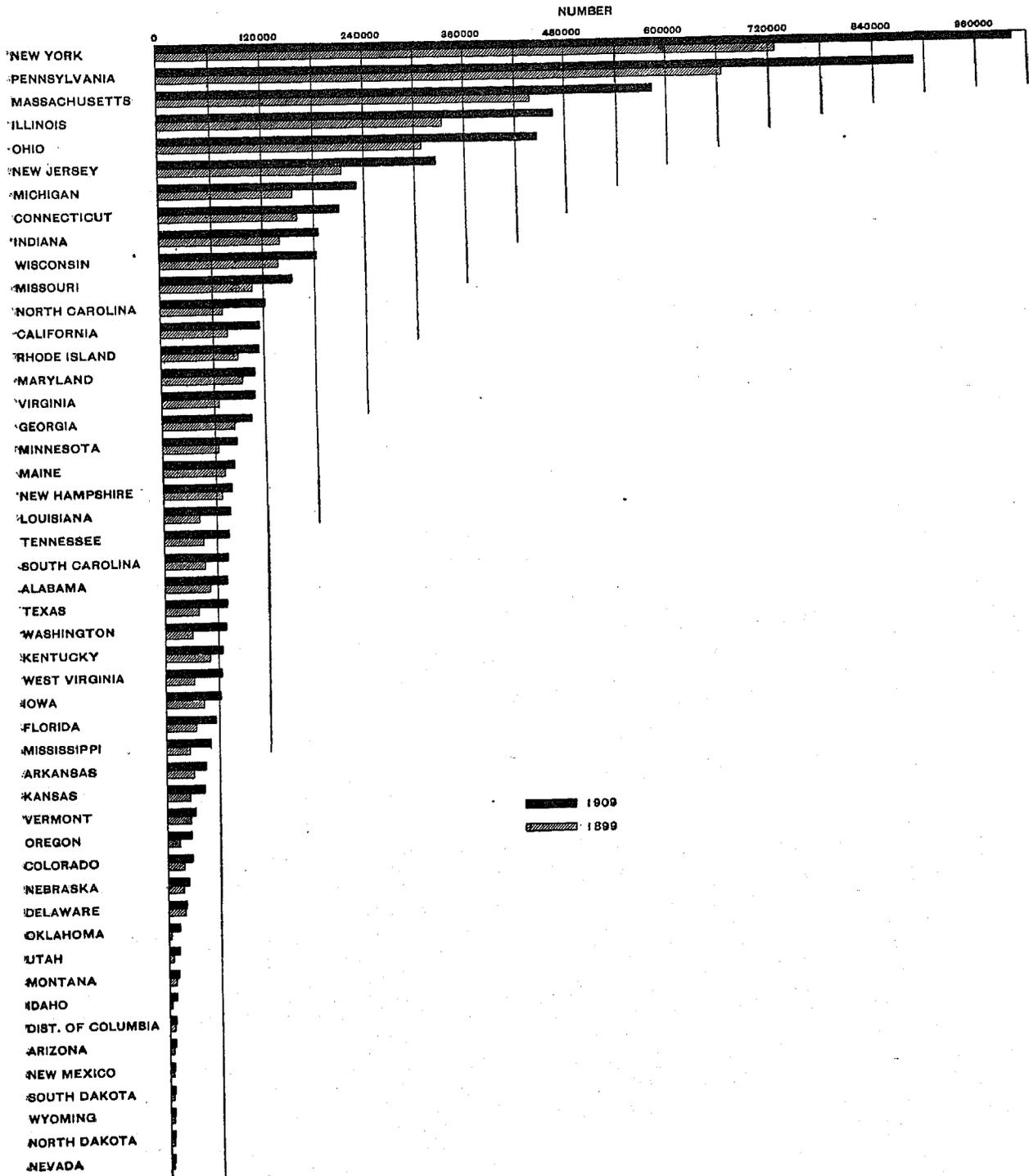


Table 2	WAGE EARNERS (AVERAGE NUMBER).						VALUE OF PRODUCTS.						VALUE ADDED BY MANUFACTURE.					
	1909		1904		1899		1909		1904		1899		1909		1904		1899	
	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.
United States.....		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0
New York.....	1	15.2	1	15.7	1	15.4	1	16.3	1	16.8	1	16.4	1	17.7	1	18.1	1	17.7
Pennsylvania.....	2	13.3	2	14.0	2	14.1	2	12.7	2	13.2	2	14.5	2	12.2	2	12.9	2	14.3
Illinois.....	4	7.0	4	6.9	4	7.1	3	9.3	3	9.5	3	9.8	3	8.9	3	9.1	3	9.1
Massachusetts.....	3	8.8	3	8.9	3	9.3	4	7.2	4	7.6	4	8.0	4	7.7	4	7.9	4	8.5
Ohio.....	5	6.8	5	6.7	5	6.5	5	7.0	5	6.5	5	6.6	5	7.2	5	6.9	5	7.0
New Jersey.....	6	4.9	6	4.9	6	4.5	6	5.5	6	5.2	6	4.8	6	5.0	6	4.8	6	4.5
Michigan.....	7	3.5	8	3.2	8	3.3	7	3.3	8	2.9	9	2.8	7	3.7	7	3.2	8	3.0
Wisconsin.....	10	2.8	10	2.8	10	2.9	8	2.9	9	2.8	8	2.9	9	2.9	9	2.9	10	2.9
Indiana.....	9	2.8	9	2.8	9	2.9	9	2.8	10	2.7	7	3.0	8	2.9	11	2.8	9	2.9
Missouri.....	11	2.3	11	2.4	11	2.3	10	2.8	7	3.0	10	2.8	11	2.6	8	3.0	11	2.7
California.....	13	1.7	12	1.8	15	1.6	11	2.6	12	2.5	12	2.3	12	2.4	12	2.4	12	1.9
Connecticut.....	8	3.2	7	3.3	7	3.4	12	2.4	11	2.5	11	2.8	10	2.7	10	2.8	7	3.0
Minnesota.....	18	1.3	19	1.3	20	1.4	13	2.0	13	2.1	13	2.0	13	1.5	13	1.5	15	1.5
Kansas.....	33	0.7	32	0.7	33	0.6	14	1.6	16	1.3	16	1.4	28	0.8	29	0.7	28	0.7
Maryland.....	15	1.6	14	1.7	12	2.0	15	1.5	14	1.6	14	1.9	15	1.4	14	1.5	13	1.7
Rhode Island.....	14	1.7	13	1.8	13	1.9	16	1.4	15	1.4	15	1.5	14	1.4	15	1.4	14	1.6
Texas.....	25	1.1	27	0.9	27	0.8	17	1.3	22	1.0	25	0.8	19	1.1	23	0.9	23	0.8
Iowa.....	29	0.9	26	0.9	25	0.9	18	1.3	18	1.1	17	1.2	22	1.0	25	0.9	20	1.0
Louisiana.....	21	1.2	25	1.0	26	0.9	19	1.1	17	1.3	21	1.0	21	1.0	17	1.1	25	0.7
Kentucky.....	27	1.0	23	1.1	22	1.1	20	1.1	19	1.1	19	1.1	16	1.3	16	1.2	16	1.2
Washington.....	26	1.0	28	0.8	31	0.7	21	1.1	27	0.9	30	0.6	17	1.2	22	1.0	29	0.7
Virginia.....	16	1.6	17	1.5	19	1.4	22	1.1	23	1.0	22	1.0	20	1.1	19	1.0	18	1.0
North Carolina.....	12	1.8	16	1.6	16	1.5	23	1.0	25	1.0	28	0.7	18	1.1	21	1.0	22	0.8
Georgia.....	17	1.6	15	1.7	14	1.8	24	1.0	21	1.0	24	0.8	23	1.0	18	1.1	21	0.9
Nebraska.....	37	0.4	36	0.4	37	0.4	25	1.0	20	1.0	18	1.1	31	0.6	34	0.5	26	0.7
Tennessee.....	22	1.1	22	1.1	24	1.0	26	0.9	26	0.9	26	0.8	25	0.9	24	0.9	24	0.8
Maine.....	19	1.2	18	1.4	17	1.5	27	0.9	24	1.0	20	1.0	24	0.9	20	2.0	17	1.1
New Hampshire.....	20	1.2	20	1.2	18	1.4	28	0.8	28	0.8	23	0.9	27	0.8	26	0.8	19	1.0
West Virginia.....	28	1.0	29	0.8	29	0.7	29	0.8	31	0.7	31	0.6	26	0.8	28	0.7	30	0.6
Alabama.....	24	1.1	21	1.1	21	1.1	30	0.7	29	0.7	29	0.6	29	0.7	27	0.8	27	0.7
Colorado.....	36	0.4	35	0.4	36	0.4	31	0.6	30	0.7	27	0.8	30	0.6	30	0.6	31	0.6
South Carolina.....	23	1.1	24	1.1	23	1.0	32	0.5	32	0.5	32	0.5	32	0.5	36	0.5	33	0.5
Oregon.....	35	0.4	37	0.3	38	0.3	33	0.4	36	0.4	37	0.3	35	0.5	38	0.4	39	0.3
Mississippi.....	31	0.8	31	0.7	34	0.6	34	0.4	35	0.4	39	0.3	34	0.5	33	0.5	37	0.4
Arkansas.....	32	0.7	34	0.6	30	0.7	35	0.4	37	0.4	36	0.3	36	0.5	32	0.5	35	0.4
Montana.....	41	0.2	39	0.2	39	0.2	36	0.4	33	0.4	33	0.5	38	0.3	37	0.4	34	0.5
Florida.....	30	0.9	30	0.8	28	0.8	37	0.4	38	0.3	38	0.3	33	0.5	31	0.5	36	0.4
Vermont.....	34	0.5	33	0.6	32	0.6	38	0.3	34	0.4	34	0.5	37	0.4	35	0.5	32	0.5
Utah.....	40	0.2	40	0.1	41	0.1	39	0.3	40	0.3	41	0.2	40	0.2	40	0.2	42	0.1
Oklahoma.....	39	0.2	42	0.1	44	0.1	40	0.3	42	0.2	44	0.1	41	0.2	43	0.1	44	0.1
Delaware.....	38	0.3	38	0.3	35	0.4	41	0.3	39	0.3	35	0.4	39	0.3	39	0.3	38	0.3
Arizona.....	44	0.1	43	0.1	42	0.1	42	0.2	41	0.2	40	0.2	42	0.2	41	0.2	40	0.3
District of Columbia.....	43	0.1	41	0.1	40	0.1	43	0.1	43	0.1	42	0.1	43	0.2	42	0.2	41	0.2
Idaho.....	42	0.1	45	0.1	47	(¹)	44	0.1	46	0.1	48	(¹)	44	0.1	44	0.1	48	(¹)
North Dakota.....	48	(¹)	48	(¹)	48	(¹)	45	0.1	45	0.1	45	0.1	46	0.1	47	(¹)	45	(¹)
South Dakota.....	46	0.1	46	(¹)	45	(¹)	46	0.1	44	0.1	43	0.1	45	0.1	45	0.1	43	0.1
Nevada.....	49	(¹)	49	(¹)	49	(¹)	47	0.1	49	(¹)	49	(¹)	49	(¹)	49	(¹)	49	(¹)
New Mexico.....	45	0.1	44	0.1	43	0.1	48	(¹)	47	(¹)	46	(¹)	47	0.1	46	0.1	46	(¹)
Wyoming.....	47	(¹)	47	(¹)	46	(¹)	49	(¹)	48	(¹)	47	(¹)	48	(¹)	48	(¹)	47	(¹)

¹ Less than one-tenth of 1 per cent.

Growth of manufacturing industries, by states: 1899-1909.—The manner in which the changes in the ranking of the states in manufacturing industries at the last three censuses have come about is indicated by Table 3, which shows the percentages of increase for the several states in value of products, value added by manufacture, and number of wage earners. The absolute numbers on which the percentages are based are given in General Table III. As elsewhere pointed out, the fact that the increases in value of products and value added by manufacture are almost without exception greater relatively than those in number of wage earners is in part attributable to the general advance in the prices of commodities during the last decade.

With only one exception all of the states show an increase from 1904 to 1909 in each of the three items covered by the table; in Montana, however, the value added by manufacture shows a decrease for this period, although this was due largely to technical differences in methods of accounting at the two censuses in the principal industry in that state, the smelting and refining of copper. A few of the states show a

decrease in one or more items for the period 1899-1904, but every state shows an increase in all three items for the decade as a whole.

Table 4 shows, for each state, the absolute increase in value of products for the 10-year period 1899-1909, the states being arranged according to their rank in the amount of increase. It also shows for each state the percentage of increase in value of products, the states being arranged according to their rank in this respect. The two methods of ranking are, of course, radically different.

The greatest percentages of increase are naturally in those states in which the development of manufacturing industries is comparatively recent. Thus Nevada, Idaho, Oklahoma, Utah, Washington, North Dakota, and Texas show exceptionally high rates of increase for the 10-year period. Of the 10 leading manufacturing states, Michigan, New Jersey, and Ohio show the most conspicuous percentages of increase. The greatest absolute increase during the decade, \$1,497,659,320, was in New York, and the smallest absolute increase, \$2,980,523, in Wyoming.

SUMMARY, BY STATES AND DIVISIONS.

Table 3

STATE.	PER CENT OF INCREASE. ¹									STATE.	PER CENT OF INCREASE. ¹								
	Wage earners (average number).			Value of products.			Value added by manufacture.				Wage earners (average number).			Value of products.			Value added by manufacture.		
	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904		1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904
United States.....	40.4	21.0	16.0	81.2	39.7	29.7	76.5	35.5	30.3	Nebraska.....	30.4	20.1	8.5	52.7	28.5	18.9	39.4	55.3	-19.2
New York.....	38.1	17.2	17.9	80.0	35.4	32.9	77.2	32.7	33.5	Tennessee.....	60.7	21.9	31.8	94.3	30.6	48.7	99.5	30.0	58.5
Pennsylvania.....	32.2	15.0	15.0	59.2	34.3	18.5	51.0	28.5	17.5	Maine.....	14.4	6.7	7.2	55.8	22.2	27.5	52.5	23.4	23.6
Illinois.....	39.9	22.8	14.0	71.2	36.1	25.8	72.6	33.0	29.8	New Hampshire.....	15.3	20.3	-3.4	53.0	33.1	14.9	40.1	31.8	6.3
Massachusetts.....	33.4	19.7	11.4	64.2	32.6	23.8	61.3	32.6	21.7	West Virginia.....	93.1	45.0	32.3	141.7	63.5	47.8	131.9	54.8	49.8
Ohio.....	45.1	22.7	18.2	92.1	49.7	28.3	80.8	41.7	27.6	Alabama.....	36.9	16.0	15.0	102.4	33.7	51.4	83.3	28.3	42.8
New Jersey.....	52.5	22.5	24.5	107.1	47.9	40.0	94.9	40.0	39.2	Colorado.....	43.9	28.7	11.9	46.0	29.9	12.4	75.0	33.8	30.8
Michigan.....	48.6	32.1	12.5	114.3	59.7	34.2	120.2	59.0	38.5	South Carolina.....	55.3	22.9	26.4	112.3	42.7	48.8	105.2	59.4	28.7
Wisconsin.....	32.8	20.6	10.1	80.7	43.6	25.8	72.9	32.7	30.4	Oregon.....	93.8	55.2	28.1	154.2	67.5	51.7	168.6	70.3	57.7
Indiana.....	34.5	21.3	10.9	71.8	47.0	16.9	72.4	41.1	22.2	Mississippi.....	83.0	30.2	44.4	138.9	49.2	70.4	154.0	37.8	84.3
Missouri.....	42.0	14.9	23.6	81.5	30.6	39.0	.....	17.3	41.8	Arkansas.....	42.7	35.9	5.0	87.8	39.1	35.0	83.1	24.7	48.5
California.....	49.3	14.9	30.0	105.8	44.3	42.7	121.1	35.0	63.8	Florida.....	18.3	30.1	-9.1	38.9	10.3	25.9	6.2	-5.5	12.4
Connecticut.....	32.0	16.1	13.7	55.6	32.8	17.1	60.2	31.1	22.2	Montana.....	62.0	36.5	15.7	113.2	44.9	47.1	119.2	38.5	56.3
Minnesota.....	31.8	21.7	7.9	83.0	33.0	37.6	74.1	31.3	32.6	Vermont.....	19.9	2.1	17.5	32.6	8.3	22.5	33.3	8.2	22.0
Kansas.....	63.0	24.3	31.2	111.1	64.0	28.7	99.0	58.7	25.4	Utah.....	117.7	45.4	48.8	244.7	59.2	116.5	216.8	48.2	113.8
Maryland.....	14.6	14.6	(*)	49.6	29.7	15.3	42.7	24.9	14.2	Oklahoma.....	452.0	140.9	129.1	560.0	119.5	200.7	622.2	142.1	195.3
Rhode Island.....	28.7	16.7	10.3	69.3	38.7	22.1	57.4	36.9	15.0	Delaware.....	3.3	15.0	-10.1	27.9	23.4	-0.4	32.0	34.6	-1.9
Texas.....	81.9	43.1	27.1	193.8	81.3	62.0	148.0	60.7	53.0	Arizona.....	106.0	34.4	53.3	145.9	79.0	37.4	32.6	23.5	7.4
Iowa.....	38.8	24.6	11.4	95.1	61.4	20.8	88.0	53.4	22.6	District of Columbia.....	25.2	22.4	2.3	54.0	37.7	11.8	68.0	41.6	18.7
Louisiana.....	86.3	36.4	30.6	101.0	20.2	67.3	147.5	28.5	92.7	Idaho.....	429.6	168.5	97.2	646.4	155.4	192.2	699.0	165.5	200.9
Kentucky.....	26.4	9.4	15.6	76.9	40.1	26.3	89.5	53.0	23.9	North Dakota.....	105.4	58.9	29.2	205.7	87.3	63.2	159.0	75.0	48.0
Washington.....	119.3	52.9	43.4	211.7	71.4	81.9	216.0	64.2	92.5	South Dakota.....	62.0	44.5	12.0	57.5	36.6	137.3	199.9	45.7	44.1
Virginia.....	59.6	31.6	21.2	102.3	47.7	37.0	91.2	44.5	32.3	Nevada.....	347.8	181.4	59.1	842.7	238.9	45.5	487.8	139.8	145.1
North Carolina.....	68.0	42.3	18.0	154.1	52.0	67.1	134.5	49.9	56.5	New Mexico.....	66.4	19.1	39.7	94.5	38.4	40.5	124.9	33.6	68.3
Georgia.....	25.5	12.8	11.3	114.6	34.3	59.8	90.1	27.4	49.2	Wyoming.....	39.2	56.3	-11.0	91.2	77.4	7.8	91.8	63.9	17.0

¹ A minus sign (-) denotes decrease.

¹ Less than one-tenth of 1 per cent.

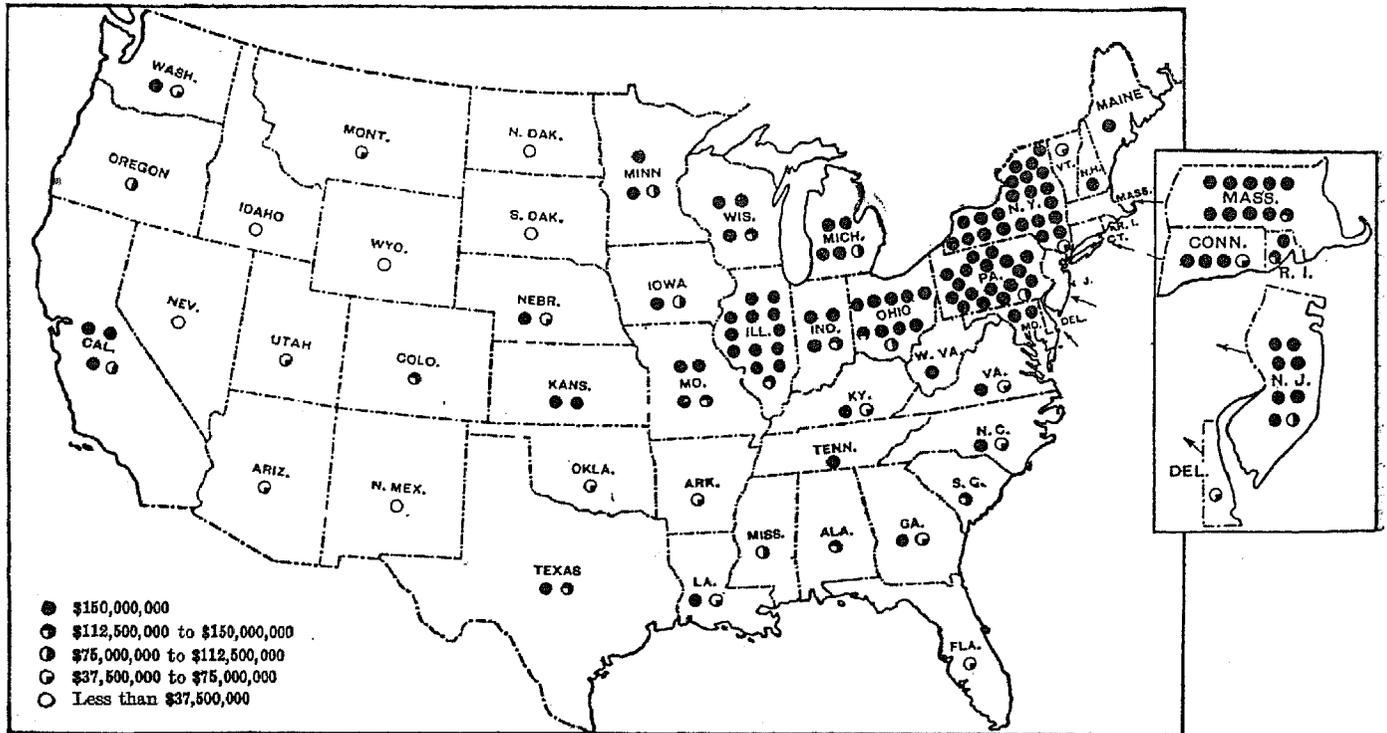
STATES RANKED ACCORDING TO AMOUNT AND PERCENTAGE OF INCREASE IN VALUE OF PRODUCTS FROM 1899 TO 1909.

Table 4

STATES IN ORDER OF ABSOLUTE INCREASE.	INCREASE.		STATES IN ORDER OF PERCENTAGE OF INCREASE.	INCREASE.	
	Amount.	Per cent.		Amount.	Per cent.
New York.....	\$1,497,659,320	80.0	Nevada.....	\$10,625,823	842.7
Pennsylvania.....	976,859,654	59.2	Idaho.....	19,298,418	648.4
Illinois.....	798,408,286	71.2	Ohio.....	45,548,469	560.0
Ohio.....	689,264,962	92.1	Washington.....	44,007,629	244.7
New Jersey.....	592,523,392	107.1	Washington.....	149,915,076	211.7
Massachusetts.....	582,902,947	64.2	North Dakota.....	12,877,666	205.7
Michigan.....	365,417,313	114.3	Texas.....	180,001,202	193.8
California.....	272,375,007	105.8	Texas.....	56,412,131	154.2
Wisconsin.....	263,552,680	80.7	Oregon.....	131,381,972	154.1
Missouri.....	257,806,975	81.5	North Carolina.....	29,817,707	145.9
Indiana.....	242,003,416	71.8	Arizona.....	94,942,704	141.7
Minnesota.....	185,726,689	83.0	West Virginia.....	46,596,993	138.9
Texas.....	180,001,202	193.8	Mississippi.....	108,330,894	114.6
Connecticut.....	175,165,545	55.6	Georgia.....	265,417,313	114.3
Kansas.....	171,095,458	111.1	Michigan.....	38,708,150	113.2
Washington.....	149,915,076	211.7	Florida.....	59,900,134	112.3
North Carolina.....	131,381,972	154.1	South Carolina.....	171,095,458	111.1
Iowa.....	126,366,772	95.1	Kansas.....	592,523,392	107.1
Rhode Island.....	114,798,415	69.3	New Jersey.....	272,375,007	105.8
Louisiana.....	112,550,719	101.0	California.....	73,851,709	102.4
Virginia.....	111,149,708	102.3	Alabama.....	.....	.....
Georgia.....	108,330,894	114.6	Virginia.....	111,149,708	102.3
Maryland.....	104,593,007	49.6	Louisiana.....	112,550,719	101.0
Kentucky.....	97,245,837	76.9	Iowa.....	126,366,772	95.1
West Virginia.....	94,942,704	141.7	Tennessee.....	3,836,532	94.5
Tennessee.....	87,467,419	94.3	New Mexico.....	87,467,419	94.3
Alabama.....	73,851,709	102.4	Ohio.....	689,264,962	92.1
Nebraska.....	68,716,126	52.7	Wyoming.....	2,980,523	91.2
Maine.....	63,070,295	55.8	Arkansas.....	35,028,789	87.8
South Carolina.....	59,900,134	112.3	Arkansas.....	8,340,189	87.5
New Hampshire.....	56,990,216	53.0	South Dakota.....	135,726,699	53.0
Oregon.....	56,412,131	154.2	Minnesota.....	.....	.....
Mississippi.....	46,836,893	138.9	Missouri.....	257,806,975	80.7
Oklahoma.....	45,548,469	560.0	Wisconsin.....	263,552,680	80.0
Utah.....	44,007,629	244.7	New York.....	1,497,659,320	76.9
Colorado.....	40,976,433	46.0	Kentucky.....	97,245,837	71.8
Florida.....	38,708,150	113.2	Indiana.....	242,003,416	71.2
Arkansas.....	35,028,789	87.8	Illinois.....	798,408,286	69.3
Arizona.....	29,817,707	145.9	Rhode Island.....	114,798,415	64.2
Montana.....	20,526,796	35.9	Massachusetts.....	582,902,947	59.2
Idaho.....	19,398,418	646.4	Pennsylvania.....	976,859,654	55.8
Vermont.....	18,794,566	32.6	Maine.....	63,070,295	.....
North Dakota.....	12,877,666	205.7	Connecticut.....	175,165,545	55.6
Delaware.....	11,518,558	27.9	District of Columbia.....	8,562,728	54.0
Nevada.....	10,625,823	842.7	New Hampshire.....	56,990,216	53.0
District of Columbia.....	8,862,728	54.0	Nebraska.....	68,716,126	52.7
South Dakota.....	8,340,189	87.5	Nebraska.....	104,593,007	49.6
New Mexico.....	3,836,532	94.5	Maryland.....	104,593,007	49.6
Wyoming.....	2,980,523	91.2	Colorado.....	40,976,433	46.0
			Montana.....	20,526,796	35.9
			Vermont.....	18,794,566	32.6
			Delaware.....	11,518,558	27.9

MANUFACTURES.

VALUE OF PRODUCTS OF MANUFACTURING INDUSTRIES, BY STATES: 1909.



States grouped according to value of products.—In Table 5 the states are arranged in six groups, according to the value of their manufactured products in 1909. The table also gives the value of products

reported for each state in 1904 and 1899, and the percentage which the total value of products for each group formed of the United States total at each of the three censuses.

Table 5 STATES GROUPED ACCORDING TO VALUE OF PRODUCTS IN 1909.	VALUE OF PRODUCTS.			STATES GROUPED ACCORDING TO VALUE OF PRODUCTS IN 1909.	VALUE OF PRODUCTS.		
	1909	1904	1899		1909	1904	1899
United States.....	\$20,672,051,870	\$14,793,902,563	\$11,406,926,701				
<i>\$1,000,000 and over.</i>				<i>\$100,000,000 but less than \$200,000,000.</i>			
Total.....	11,989,803,099	8,713,511,973	6,851,884,538	Total.....	\$1,271,036,960	\$948,240,656	\$725,121,924
New York.....	3,369,490,192	2,488,345,579	1,871,830,872	Nebraska.....	199,018,579	154,918,220	130,302,453
Pennsylvania.....	2,626,742,034	1,955,551,332	1,649,882,380	Tennessee.....	180,216,548	137,960,476	92,749,129
Illinois.....	1,919,276,694	1,410,342,129	1,120,868,308	Maine.....	176,029,393	144,020,197	112,959,098
Massachusetts.....	1,490,529,386	1,124,092,051	907,626,439	New Hampshire.....	164,581,019	123,610,904	107,590,803
Ohio.....	1,437,935,817	960,811,857	748,670,855	West Virginia.....	161,949,526	99,040,676	67,006,822
New Jersey.....	1,145,529,076	774,369,025	553,005,684	Alabama.....	145,991,638	109,169,922	72,109,929
				Colorado.....	130,044,312	100,143,999	89,087,879
<i>\$500,000,000 but less than \$1,000,000,000.</i>				South Carolina.....	113,235,945	79,376,262	53,335,811
Total.....	2,958,361,351	2,040,981,597	1,557,205,980	<i>Less than \$100,000,000.</i>			
Michigan.....	685,109,169	429,120,060	319,691,856	Total.....	792,446,192	542,023,917	380,328,295
Wisconsin.....	590,305,538	411,139,681	326,752,378	Oregon.....	93,004,845	55,525,123	36,592,714
Indiana.....	579,075,046	393,954,405	337,071,630	Mississippi.....	80,555,410	57,451,445	33,718,517
Missouri.....	574,111,070	439,548,957	316,304,035	Arkansas.....	74,916,367	53,864,394	39,887,578
California.....	529,760,528	367,218,494	257,385,521	Montana.....	73,271,793	66,415,452	52,744,997
				Florida.....	72,889,659	50,298,290	34,183,509
<i>\$300,000,000 but less than \$600,000,000.</i>				Vermont.....	68,309,824	63,083,611	51,515,228
Total.....	1,540,464,468	1,118,561,152	903,883,759	Utah.....	61,989,277	38,926,464	17,981,648
Connecticut.....	490,271,695	369,082,091	315,106,150	Oklahoma.....	53,682,405	24,459,107	8,133,936
Minnesota.....	400,419,621	307,858,073	223,692,922	Delaware.....	52,839,619	41,180,276	41,321,061
Kansas.....	325,104,002	198,244,992	154,008,544	Arizona.....	50,256,694	28,083,192	20,438,987
Maryland.....	315,669,150	243,375,996	211,076,143	District of Columbia.....	25,289,136	18,359,159	16,428,408
				Idaho.....	22,399,860	8,768,743	3,001,442
<i>\$200,000,000 but less than \$300,000,000.</i>				North Dakota.....	19,137,506	10,217,914	6,259,840
Total.....	2,120,238,800	1,430,583,268	988,504,205	South Dakota.....	17,870,135	13,085,333	9,529,946
Rhode Island.....	280,343,797	202,109,583	165,590,382	Nevada.....	11,886,828	3,096,274	1,261,005
Texas.....	272,895,635	150,528,389	92,694,433	New Mexico.....	7,897,756	5,705,880	4,060,924
Iowa.....	259,237,637	160,572,313	132,870,865	Wyoming.....	6,249,078	3,523,260	3,268,555
Louisiana.....	223,948,638	188,379,592	111,397,919				
Kentucky.....	223,754,497	159,753,968	126,508,690	Percentage each group of states contributed to total value of products.....	100.0	100.0	100.0
Washington.....	220,746,421	128,821,667	70,631,345	\$1,000,000,000 and over.....	58.0	58.9	60.1
Virginia.....	219,793,858	148,856,525	108,644,150	\$500,000,000 but less than \$1,000,000,000.....	14.3	13.8	13.6
North Carolina.....	216,656,055	142,520,776	85,274,083	\$300,000,000 but less than \$600,000,000.....	7.5	7.6	7.9
Georgia.....	202,863,282	151,040,455	94,532,368	\$200,000,000 but less than \$300,000,000.....	10.3	9.7	8.7
				\$100,000,000 but less than \$200,000,000.....	6.1	6.4	6.4
				Less than \$100,000,000.....	3.8	3.7	3.3

This table brings out the way in which individual states have gradually been advancing from the lower to the higher groups. For example, at the census of 1909 there were six states with a value of products amounting to more than \$1,000,000,000 each; at the census of 1904 there were only four states in this class, and in 1899 only three. Again, at the census of 1909 there were five states which reported a value of products amounting to \$500,000,000 but less than \$1,000,000,000 each, none of which reported products valued at as much as \$500,000,000 in 1904 or 1899. In 1904 there were two states in this class, and in 1899, three, but by 1909 all these states had advanced into the group comprising states which reported products valued at more than \$1,000,000,000 each.

The percentages at the end of the preceding table show whether the principal manufacturing states have made greater or less progress, relatively speaking, than those of less importance. It appears that the six states which in 1909 produced manufactured products valued at \$1,000,000,000 or more each reported a somewhat smaller proportion of the total value of products for the country in that year than in 1904 or in 1899, the percentages being 58, 58.9, and 60.1, respectively. On the other hand, the five important manufacturing states which in 1909 made up the group comprising states reporting products valued at more than

\$500,000,000 but less than \$1,000,000,000 each were credited with a materially larger proportion of the total in 1909 than at either of the two preceding censuses. The group comprising states producing less than \$100,000,000 worth of products each in 1909 also had a somewhat larger proportion of the total at that census than at the two preceding. The changes shown for the other groups are not particularly significant.

Leading industries of each state.—As the statistics for the individual industries in each state and the District of Columbia are presented and discussed in detail in Volume IX of the Thirteenth Census Reports, only a condensed summary need here be given.

Table 6, which follows, names the five leading industries in each state in 1909 as determined by value of products. It also gives the value of products for each industry where this can be done without revealing individual operations, together with the proportion which this value formed of the total for all industries in the state and of the total for the specified industry in the United States. Similar percentages are given with respect to average number of wage earners, but the absolute numbers are omitted. Of course, in some cases industries not listed ranked higher with respect to number of wage earners than some of those listed. The states are arranged alphabetically.

FIVE LEADING INDUSTRIES OF EACH STATE AS MEASURED BY VALUE OF PRODUCTS: 1909.

STATE AND INDUSTRY	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.		STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.	
		Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).			Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).
ALABAMA.											
Lumber and timber products.....	\$26,057,662	17.9	31.1	2.3	3.2	Smelting and refining, lead.....					
Cotton goods, including cotton small wares.....	22,211,748	15.2	17.6	3.5	3.4	Beet sugar.....					
Iron and steel, blast furnaces.....	21,235,984	14.5	5.2	5.4	9.8	Iron and steel, steel works and rolling mills.....	\$9,656,810	7.4	2.3	0.7	0.7
Foundry and machine-shop products.....	11,550,217	7.9	8.2	0.9	1.1	Slaughtering and meat packing.....	7,867,706	6.1	1.0	0.9	0.7
Oil, cottonseed, and cake.....	9,178,016	6.3	2.2	6.2	9.5	Flour-mill and gristmill products.....					
ARIZONA.											
Smelting and refining, copper.....	41,059,240	81.7	48.6	10.8	20.0	Brass and bronze products.....	66,932,969	13.7	8.0	44.6	41.4
Cars and general shop construction and repairs by steam-railroad companies.....	2,393,930	4.8	16.9	0.6	0.4	Foundry and machine-shop products.....	65,535,155	13.4	17.9	5.3	7.1
Lumber and timber products.....	1,419,114	2.8	13.0	0.1	0.1	Cotton goods, including cotton small wares.....	24,231,881	4.9	6.8	3.9	3.8
Flour-mill and gristmill products.....	1,316,757	2.6	0.8	0.1	0.1	Silk and silk goods, including throwsters.....	21,062,687	4.3	4.1	10.7	8.8
Printing and publishing.....	784,487	1.6	4.2	0.1	0.1	Firearms and ammunition.....	19,948,235	4.1	4.0	54.5	54.6
ARKANSAS.											
Lumber and timber products.....	40,640,327	54.2	73.2	3.5	4.7	Leather, tanned, curried, and finished.....	12,079,225	22.9	14.3	3.7	4.6
Oil, cottonseed, and cake.....	7,788,835	10.4	2.4	5.3	6.4	Foundry and machine-shop products.....	4,751,195	9.0	18.4	0.4	0.4
Flour-mill and gristmill products.....	5,615,486	7.5	0.7	0.6	0.8	Cars, steam-railroad, not including operations of railroad companies.....	3,628,063	6.9	7.9	2.9	2.9
Cars and general shop construction and repairs by steam-railroad companies.....	4,153,926	5.5	7.2	1.0	1.2	Cars and general shop construction and repairs by steam-railroad companies.....	3,251,261	6.2	7.2	0.8	0.8
Printing and publishing.....	2,082,365	2.8	2.2	0.3	0.4	Dyeing and finishing textiles.....					
CALIFORNIA.											
Lumber and timber products.....	45,000,276	8.5	19.9	3.9	3.3	Printing and publishing.....	4,469,492	19.4	20.3	0.7	0.6
Smelting and refining, lead.....	34,280,063	6.5	1.4	2.5	1.8	Bread and other bakery products.....	3,589,554	14.2	12.7	0.9	1.0
Slaughtering and meat packing.....	32,914,829	6.2	6.7	21.0	12.9	Gas, illuminating and heating.....	2,306,340	9.1	8.0	1.4	1.7
Canning and preserving.....	26,730,891	5.1	7.3	2.2	1.6	Gas, illuminating and heating.....	1,882,575	7.5	1.8	0.1	0.2
Foundry and machine-shop products.....						Slaughtering and meat packing.....	1,804,791	7.1	3.2	0.5	0.5
						Liquors, malt.....					

MANUFACTURES.

FIVE LEADING INDUSTRIES OF EACH STATE AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.		STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.	
		Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).			Value of products.	Wage earners (average number).		
										Value of products.	Wage earners (average number).
FLORIDA.						MASSACHUSETTS.					
Tobacco manufactures.....	\$21,575,021	29.6	21.4	5.2	7.4	Boots and shoes, including cut stock and findings.....	\$236,342,915	15.9	14.2	46.1	41.9
Lumber and timber products.....	20,863,016	28.6	33.5	1.8	2.8	Cotton goods, including cotton small wares.....	186,462,313	12.5	18.6	29.7	28.7
Turpentine and rosin.....	11,937,518	16.4	31.6	47.2	45.9	Woolen, worsted, and felt goods, and wool hats.....	141,966,882	9.5	9.2	32.6	31.9
Fertilizers.....	3,878,296	5.3	1.0	3.7	3.2	Foundry and machine-shop products.....	89,925,071	5.8	7.6	7.1	8.3
Printing and publishing.....	1,865,848	2.6	1.6	0.3	0.4	Printing and publishing.....	47,445,006	3.2	3.0	6.4	6.8
GEORGIA.						MICHIGAN.					
Cotton goods, including cotton small wares.....	48,036,817	23.7	25.6	7.6	7.3	Automobiles, including bodies and parts.....	96,651,451	14.1	11.0	38.8	33.6
Lumber and timber products.....	24,632,093	12.1	21.3	2.1	3.2	Lumber and timber products.....	61,513,560	9.0	15.4	5.3	5.1
Oil, cottonseed, and cake.....	23,640,779	11.7	2.8	16.0	16.9	Foundry and machine-shop products.....	45,399,023	6.6	9.4	3.7	4.1
Fertilizers.....	16,800,301	8.3	2.6	16.2	15.1	Flour-mill and gristmill products.....	34,800,803	5.1	0.7	3.9	3.9
Flour-mill and gristmill products.....	7,999,912	3.9	0.4	0.9	1.0	Furniture and refrigerators.....	28,641,684	4.2	7.2	11.9	12.9
IDAHO.						MINNESOTA.					
Lumber and timber products.....	10,689,310	47.7	63.4	0.9	0.7	Flour-mill and gristmill products.....	139,136,129	34.0	5.1	15.7	11.0
Flour-mill and gristmill products.....	2,479,719	11.1	1.5	0.3	0.3	Lumber and timber products.....	42,352,507	10.3	24.4	3.7	3.0
Beet sugar.....						Slaughtering and meat packing.....	25,753,697	6.3	2.3	1.9	2.1
Cars and general shop construction and repairs by steam-railroad companies.....	1,366,408	6.1	10.3	0.3	0.3	Butter, cheese, and condensed milk.....	25,287,462	6.2	1.4	0.2	6.4
Printing and publishing.....	1,148,633	5.1	5.7	0.2	0.2	Printing and publishing.....	15,982,212	3.9	6.7	2.2	2.2
ILLINOIS.						MISSISSIPPI.					
Slaughtering and meat packing.....	389,594,906	20.3	5.7	28.4	29.8	Lumber and timber products.....	42,792,844	53.1	66.3	3.7	4.8
Foundry and machine-shop products.....	138,578,993	7.2	11.2	11.3	9.8	Oil, cottonseed, and cake.....	15,965,543	19.8	5.0	10.8	14.7
Clothing, men's, including shirts.....	89,472,755	4.7	7.8	15.8	15.1	Cars and general shop construction and repairs by steam-railroad companies.....	3,233,288	4.0	5.1	0.8	0.9
Printing and publishing.....	87,247,090	4.5	6.1	11.8	11.1	Cotton goods, including cotton small wares.....	3,102,398	3.8	5.2	0.5	0.7
Iron and steel, steel works and rolling mills.....	86,608,137	4.5	3.8	8.8	7.3	Fertilizers.....	2,125,029	2.6	0.9	2.0	2.4
INDIANA.						MISSOURI.					
Slaughtering and meat packing.....	47,289,469	8.2	2.4	3.5	4.9	Slaughtering and meat packing.....	79,581,294	13.9	3.1	5.8	5.2
Flour-mill and gristmill products.....	40,541,422	7.0	1.2	4.6	5.8	Boots and shoes, including cut stock and findings.....	48,751,235	8.5	11.4	9.5	8.8
Foundry and machine-shop products.....	39,883,774	6.9	8.5	3.2	3.0	Flour-mill and gristmill products.....	44,508,106	7.8	1.4	5.0	5.6
Iron and steel, steel works and rolling mills.....	38,651,848	6.7	6.6	3.9	5.1	Tobacco manufactures.....	30,950,638	5.4	2.9	7.4	2.7
Liquors, distilled.....	31,610,468	5.5	0.2	15.4	6.7	Printing and publishing.....	29,651,153	5.2	7.1	4.0	4.2
IOWA.						MONTANA.					
Slaughtering and meat packing.....	59,045,232	22.8	6.7	4.3	4.6	Smelting and refining, copper.....	6,333,778	8.6	26.6	0.5	0.4
Butter, cheese, and condensed milk.....	25,849,866	10.0	2.0	9.4	6.7	Lumber and timber products.....					
Foundry and machine-shop products.....	14,064,382	5.4	8.3	1.1	1.0	Smelting and refining, lead.....					
Flour-mill and gristmill products.....	12,870,603	5.0	1.0	1.5	1.6	Cars and general shop construction and repairs by steam-railroad companies.....	2,810,521	3.8	16.4	0.7	0.7
Lumber and timber products.....	12,659,259	4.9	7.6	1.1	0.7	Liquors, malt.....	2,439,832	3.3	2.1	0.7	0.4
KANSAS.						NEBRASKA.					
Slaughtering and meat packing.....	165,360,516	50.9	24.0	12.1	11.8	Slaughtering and meat packing.....	92,305,484	46.4	24.7	6.7	6.7
Flour-mill and gristmill products.....	68,476,410	21.1	5.3	7.7	6.0	Smelting and refining, lead.....					
Cars and general shop construction and repairs by steam-railroad companies.....	11,193,106	3.4	17.4	2.8	2.7	Flour-mill and gristmill products.....	17,835,596	9.0	3.4	2.0	2.1
Smelting and refining, zinc.....	10,857,250	3.3	4.1	31.7	27.4	Butter, cheese, and condensed milk.....	7,681,272	3.9	1.6	2.8	2.1
Printing and publishing.....	7,008,865	2.2	7.3	0.9	1.3	Printing and publishing.....	6,667,290	3.3	9.6	0.9	0.9
KENTUCKY.						NEVADA.					
Liquors, distilled.....	44,360,104	19.8	3.9	21.7	39.5	Smelting and refining, copper.....					
Flour-mill and gristmill products.....	22,364,950	10.0	2.1	2.5	3.6	Cars and general shop construction and repairs by steam-railroad companies.....	1,032,707	8.7	36.2	0.3	0.3
Lumber and timber products.....	21,380,564	9.6	19.9	1.8	1.9	Slaughtering and meat packing.....					
Tobacco manufactures.....	18,597,786	8.3	6.1	4.5	2.4	Flour-mill and gristmill products.....	597,929	5.0	1.1	0.1	0.1
Foundry and machine-shop products.....	9,626,686	4.3	6.9	0.8	0.8	Printing and publishing.....	519,243	4.4	8.0	0.1	0.1
LOUISIANA.						NEW HAMPSHIRE.					
Lumber and timber products.....	62,837,912	28.1	60.5	5.4	6.6	Boots and shoes, including cut stock and findings.....	39,439,544	24.0	18.1	7.7	7.2
Sugar, refining, not including beet sugar.....	34,774,173	15.5	1.5	14.0	12.4	Cotton goods, including cotton small wares.....	33,601,830	20.4	28.3	5.3	58.8
Sugar and molasses.....	29,001,027	12.9	5.2	94.7	95.2	Woolen, worsted, and felt goods, and wool hats.....	16,730,652	10.2	12.1	3.8	5.6
Oil, cottonseed, and cake.....	13,034,536	5.8	1.2	8.8	5.2	Lumber and timber products.....	15,284,357	9.3	10.8	1.3	1.2
Rice, cleaning and polishing.....	12,528,656	5.6	0.9	56.0	55.9	Paper and wood pulp.....	13,994,251	8.5	4.3	5.2	4.5
MAINE.						NEW JERSEY.					
Paper and wood pulp.....	33,950,230	19.3	10.8	12.7	11.4	Smelting and refining, copper.....	125,651,087	11.0	0.7	33.2	14.9
Lumber and timber products.....	26,124,640	14.8	18.9	2.3	2.2	Petroleum, refining.....					
Cotton goods, including cotton small wares.....	21,932,225	12.5	18.3	3.5	3.9	Silk and silk goods, including throwsters.....	65,429,550	5.7	9.3	33.2	30.6
Woolen, worsted, and felt goods, and wool hats.....	18,490,120	10.5	10.9	4.2	5.2	Foundry and machine-shop products.....	65,398,437	5.7	8.5	5.3	5.2
Boots and shoes, including cut stock and findings.....	15,508,771	8.8	8.3	3.0	3.3	Slaughtering and meat packing.....	37,583,395	3.3	0.6	2.7	2.0
MARYLAND.											
Clothing, men's, including shirts.....	36,921,294	11.7	18.3	6.5	8.3						
Smelting and refining, copper.....											
Copper, tin, and sheet-iron products.....	16,909,447	5.4	4.9	8.5	7.2						
Canning and preserving.....	13,709,449	4.3	8.0	8.7	14.4						
Slaughtering and meat packing.....	13,682,951	4.3	1.0	1.0	1.2						

SUMMARY, BY STATES AND DIVISIONS.

FIVE LEADING INDUSTRIES OF EACH STATE AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.		STATE AND INDUSTRY.	Value of products.	PER CENT OF TOTAL FOR ALL INDUSTRIES IN THE STATE.		PER CENT OF TOTAL FOR THE INDUSTRY IN THE UNITED STATES.	
		Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).			Value of products.	Wage earners (average number).	Value of products.	Wage earners (average number).
NEW MEXICO.						SOUTH DAKOTA.					
Cars and general shop construction and repairs by steam-railroad companies.....	82,250,920	28.5	35.9	0.6	0.5	Flour-mill and gristmill products.....	96,298,216	34.7	7.9	0.7	0.7
Lumber and timber products.....	2,162,396	27.4	35.6	0.2	0.2	Butter, cheese, and condensed milk.....	2,685,511	15.0	3.9	1.0	0.8
Coke.....	588,782	7.5	6.8	0.1	0.1	Printing and publishing.....	1,975,976	11.1	22.9	0.3	0.3
Printing and publishing.....	461,621	5.8	0.7	0.1	0.1	Bread and other bakery products.....	1,160,536	6.5	7.9	0.3	0.3
Flour-mill and gristmill products.....						Lumber and timber products.....	944,777	5.3	12.5	0.1	0.1
NEW YORK.						TENNESSEE.					
Clothing, women's.....	272,517,792	8.1	9.8	70.8	63.8	Lumber and timber products.....	30,456,507	16.9	30.3	2.6	3.2
Clothing, men's, including shirts.....	266,075,427	7.9	9.1	46.8	38.1	Flour-mill and gristmill products.....	29,070,619	16.1	2.1	3.3	4.0
Printing and publishing.....	216,946,482	6.4	6.3	29.4	24.4	Foundry and machine-shop products.....	9,189,791	5.1	5.5	0.7	0.8
Foundry and machine-shop products.....	154,370,846	4.6	6.4	12.6	12.1	Printing and publishing.....	7,173,290	4.0	3.9	1.0	1.1
Slaughtering and meat packing.....	127,130,051	3.8	0.6	9.3	6.8	Cars and general shop construction and repairs by steam-railroad companies.....	6,776,511	3.8	7.5	1.7	2.0
NORTH CAROLINA.						TEXAS.					
Cotton goods, including cotton small wares.....	72,680,385	33.5	38.9	11.6	12.5	Slaughtering and meat packing.....	42,529,746	15.6	5.2	3.1	4.1
Tobacco manufactures.....	35,986,639	16.6	6.8	8.6	4.9	Flour-mill and gristmill products.....	32,484,612	11.9	1.7	3.7	3.1
Lumber and timber products.....	33,524,653	15.5	23.0	2.9	4.9	Lumber and timber products.....	32,261,440	11.8	33.5	2.5	3.4
Oil, cottonseed, and cake.....	8,504,477	3.9	1.0	5.8	6.8	Oil, cottonseed, and cake.....	29,915,772	11.0	4.4	29.2	18.9
Flour-mill and gristmill products.....	8,501,219	3.9	0.4	1.0	1.3	Petroleum, refining.....					
NORTH DAKOTA.						UTAH.					
Flour-mill and gristmill products.....	11,685,116	61.1	15.6	1.3	1.1	Smelting and refining, copper.....					
Printing and publishing.....	1,909,514	10.0	28.3	0.3	0.3	Smelting and refining, lead.....					
Butter, cheese, and condensed milk.....	1,029,135	5.4	2.2	0.4	0.6	Beet sugar.....					
Leather goods.....	683,273	3.6	3.5	0.7	0.3	Flour-mill and gristmill products.....	3,130,895	5.1	1.8	0.4	0.5
Cars and general shop construction and repairs by steam-railroad companies.....	679,612	3.6	16.6	0.2	0.2	Cars and general shop construction and repairs by steam-railroad companies.....	2,740,463	4.4	14.7	0.7	0.6
OHIO.						VERMONT.					
Iron and steel, steel works and rolling mills.....	197,780,043	13.8	8.6	20.1	16.1	Marble and stone work.....	12,395,379	18.1	30.8	11.0	15.9
Foundry and machine-shop products.....	145,835,648	10.1	14.5	11.9	12.2	Lumber and timber products.....	8,598,084	12.6	14.2	0.7	0.7
Iron and steel, blast furnaces.....	83,699,238	5.8	1.6	21.4	19.0	Butter, cheese, and condensed milk.....	8,112,239	11.9	1.5	3.0	2.8
Rubber goods, not elsewhere specified.....	53,910,531	3.7	2.3	42.0	39.1	Woolen, worsted, and felt goods, and wool hats.....	4,496,903	6.6	6.8	1.0	1.4
Slaughtering and meat packing.....	50,804,100	3.5	0.7	3.7	3.4	Flour-mill and gristmill products.....	4,133,337	6.0	0.5	0.5	0.4
OKLAHOMA.						VIRGINIA.					
Flour-mill and gristmill products.....	19,144,475	35.7	6.4	2.2	2.1	Lumber and timber products.....	35,855,310	16.3	31.5	3.1	4.8
Oil, cottonseed, and cake.....	5,186,605	9.7	4.4	3.5	3.4	Tobacco manufactures.....	25,385,314	11.5	7.5	6.1	4.7
Lumber and timber products.....	4,438,563	8.3	24.2	0.4	0.5	Flour-mill and gristmill products.....	17,598,045	8.0	1.0	2.0	2.6
Printing and publishing.....	3,988,542	7.4	12.9	0.5	0.7	Cars and general shop construction and repairs by steam-railroad companies.....	9,955,501	4.5	7.2	2.5	2.7
Smelting and refining, zinc.....	3,002,233	5.6	4.3	8.8	8.5	Leather, tanned, curried, and finished.....	8,266,850	3.8	1.5	2.5	2.6
OREGON.						WASHINGTON.					
Lumber and timber products.....	30,199,857	32.5	52.4	2.6	2.2	Lumber and timber products.....	89,154,520	40.4	63.3	7.7	6.3
Flour-mill and gristmill products.....	8,891,001	9.6	1.4	1.0	1.0	Flour-mill and gristmill products.....	17,832,944	8.1	0.9	2.0	1.6
Slaughtering and meat packing.....	5,879,615	6.3	1.3	0.4	0.4	Slaughtering and meat packing.....	15,683,996	7.1	1.2	1.1	0.9
Printing and publishing.....	5,040,523	5.4	5.1	0.7	0.6	Canning and preserving.....	9,585,387	4.3	2.9	6.1	3.4
Butter, cheese, and condensed milk.....	4,920,462	5.3	1.5	1.8	2.3	Printing and publishing.....	9,286,188	4.2	3.8	1.3	1.0
PENNSYLVANIA.						WEST VIRGINIA.					
Iron and steel, steel works and rolling mills.....	500,343,995	19.0	14.5	50.8	52.9	Lumber and timber products.....	28,758,451	17.8	29.2	2.5	2.7
Foundry and machine-shop products.....	210,746,257	8.0	9.9	17.2	16.4	Iron and steel, steel works and rolling mills.....	22,435,411	13.9	7.9	2.3	2.1
Iron and steel, blast furnaces.....	168,578,413	6.4	1.7	43.1	37.8	Leather, tanned, curried, and finished.....	12,450,592	7.7	2.5	3.8	2.5
Leather, tanned, curried, and finished.....	77,926,321	3.0	1.6	23.8	22.5	Tin plate and terneplate.....	9,257,524	5.7	2.1	19.3	24.9
Woolen, worsted, and felt goods, and wool hats.....	77,446,996	2.9	3.1	17.8	16.2	Glass.....	7,779,483	4.8	9.7	8.4	9.9
RHODE ISLAND.						WISCONSIN.					
Woolen, worsted, and felt goods, and wool hats.....	74,600,240	26.6	22.0	17.1	14.8	Lumber and timber products.....	57,969,170	9.3	18.7	5.0	4.9
Cotton goods, including cotton small wares.....	50,312,597	17.9	25.4	8.0	7.6	Foundry and machine-shop products.....	54,124,000	9.2	13.3	4.4	4.5
Jewelry.....	20,635,100	7.4	8.4	25.7	31.3	Butter, cheese, and condensed milk.....	53,843,249	9.1	1.6	19.6	15.6
Foundry and machine-shop products.....	20,611,693	7.4	9.6	1.7	2.1	Leather, tanned, curried, and finished.....	44,667,676	7.6	4.1	13.6	12.1
Dyeing and finishing textiles.....	13,955,700	5.0	6.9	16.7	17.7	Liquors, malt.....	32,125,919	5.4	2.8	8.6	9.3
SOUTH CAROLINA.						WYOMING.					
Cotton goods, including cotton small wares.....	65,929,585	58.2	62.2	10.5	12.0	Cars and general shop construction and repairs by steam-railroad companies.....	2,336,673	37.4	54.9	0.6	0.6
Lumber and timber products.....	13,140,886	11.6	20.0	1.1	2.1	Lumber and timber products.....	751,249	12.0	22.6	0.1	0.1
Oil, cottonseed, and cake.....	10,902,835	9.6	2.4	7.4	10.3	Flour-mill and gristmill products.....	746,299	11.9	1.0	0.1	0.1
Fertilizers.....	9,024,900	8.0	2.5	8.7	10.1	Printing and publishing.....	490,544	7.8	5.6	0.1	0.1
Printing and publishing.....	1,600,591	1.4	1.1	0.2	0.3	Iron and steel, steel works and rolling mills.....					

It will be seen from this table that there are marked differences among the states with respect to the degree of diversification in industry. In more than half of the states the five leading industries together accounted in 1909 for 50 per cent or more of the total value of products for all manufacturing industries combined, but in some the proportion was much lower; for example, in New York the five leading industries accounted for only 30.8 per cent of the total value of products.

The lumber industry in 1909 ranked first, as measured by value of products, in 12 states—Alabama, Arkansas, California, Idaho, Louisiana, Mississippi, Oregon, Tennessee, Virginia, Washington, West Virginia, and Wisconsin.

The slaughtering and meat-packing industry ranked first on this basis in seven states—Illinois, Indiana, Iowa, Kansas, Missouri, Nebraska, and Texas. In only two of these states, however, did it rank first in number of wage earners.

The manufacture of flour-mill and gristmill products held first place in Minnesota, North Dakota, Oklahoma,

and South Dakota; steel works and rolling mills, in Ohio and Pennsylvania; the manufacture of boots and shoes, in Massachusetts and New Hampshire; the manufacture of cotton goods, in Georgia, North Carolina, and South Carolina; steam-railroad repair shops, in New Mexico and Wyoming (the least important states in respect to total value of manufactured products); and the smelting and refining of copper, in Arizona, Montana, Nevada, New Jersey, and Utah. There is no other industry which ranked first in more than one state.

Leading states in each industry.—The following table names the states holding first, second, and third place in each industry as measured by value of products in 1909, and shows the percentage that the value of products for each of the three states formed of the total for the industry in the United States. In some instances these percentages have been omitted, because their inclusion would result indirectly in disclosing the value of products reported by individual concerns.

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909.

INDUSTRY.	Total for United States.	VALUE OF PRODUCTS: 1909					
		State ranking—					
		First.		Second.		Third.	
		Name.	Per cent of United States total.	Name.	Per cent of United States total.	Name.	Per cent of United States total.
Agricultural implements.....	\$146,329,268	Illinois.....	39.1	New York.....	10.2	Ohio.....	9.9
Artificial flowers and feathers and plumes.....	23,980,567	New York.....	88.2	Pennsylvania.....	5.5	Illinois.....	1.7
Artificial stone.....	18,595,688	Iowa.....	8.4	Illinois.....	8.0	Ohio.....	7.4
Artists' materials.....	2,339,935	New Jersey.....	37.3	Illinois.....	18.0	New York.....	15.6
Automobiles, including bodies and parts.....	249,202,075	Michigan.....	38.8	Ohio.....	15.6	New York.....	12.4
Awnings, tents, and sails.....	14,499,020	New York.....	15.3	Missouri.....	12.3	Ohio.....	9.6
Axle grease.....	1,480,811	New York.....	38.1	Missouri.....	15.1	Illinois.....	11.7
Babbitt metal and solder.....	19,787,935	New York.....	31.0	Illinois.....	21.0	Pennsylvania.....	10.7
Bags, other than paper.....	54,881,622	Missouri.....	.....	Minnesota.....	.....	Louisiana.....	9.8
Bags, paper.....	15,697,959	New York.....	35.8	Maine.....	.....	Ohio.....	15.2
Baking powders and yeast.....	20,774,588	Illinois.....	36.7	New York.....	.....	California.....	.....
Baskets, and rattan and willow ware.....	5,695,356	New York.....	34.2	Michigan.....	8.4	Maryland.....	8.3
Beet sugar.....	48,122,383	Colorado.....	.....	California.....	.....	Michigan.....	21.8
Belting and hose, leather.....	23,601,887	New York.....	27.1	Massachusetts.....	23.8	Illinois.....	9.2
Belting and hose, woven and rubber.....	24,729,221	New Jersey.....	39.6	Massachusetts.....	.....	Ohio.....	13.9
Bicycles, motorcycles, and parts.....	10,698,567	Massachusetts.....	25.3	Ohio.....	21.6	Illinois.....	16.6
Billiard tables and materials.....	5,877,337	New York.....	.....	Michigan.....	.....	Ohio.....	.....
Blacking and cleansing and polishing preparations.....	14,679,120	New York.....	26.1	Massachusetts.....	25.3	Illinois.....	8.4
Bluing.....	1,074,231	Massachusetts.....	.....	New Jersey.....	.....	New York.....	12.4
Bone, carbon, and lamp black.....	1,093,494	West Virginia.....	54.5	Pennsylvania.....	.....	New Jersey.....	.....
Boots and shoes, including cut stock and findings.....	512,797,642	Massachusetts.....	46.1	Missouri.....	9.5	New York.....	9.4
Boots and shoes, rubber.....	49,720,567	Massachusetts.....	37.7	Connecticut.....	.....	Rhode Island.....	.....
Boxes, cigar.....	8,491,082	Pennsylvania.....	27.4	New York.....	26.3	Ohio.....	8.4
Boxes, fancy and paper.....	54,450,015	New York.....	26.1	Illinois.....	11.7	Massachusetts.....	10.6
Boxes and bronze products.....	149,989,058	Connecticut.....	44.6	New York.....	14.8	Michigan.....	9.3
Bread and other bakery products.....	396,864,844	New York.....	21.7	Pennsylvania.....	11.6	Illinois.....	9.1
Brick and tile.....	92,776,504	Illinois.....	10.5	Ohio.....	10.1	Pennsylvania.....	9.9
Brooms.....	14,431,593	New York.....	15.3	Illinois.....	10.2	Pennsylvania.....	8.7
Brushes.....	14,694,003	New York.....	27.7	Massachusetts.....	19.6	New Jersey.....	10.6
Butter, cheese, and condensed milk.....	274,557,718	Wisconsin.....	19.6	New York.....	15.5	Iowa.....	9.4
Butter, reworking.....	8,200,533	Illinois.....	.....	Iowa.....	.....	Ohio.....	16.5
Buttons.....	22,708,065	New York.....	41.3	Iowa.....	17.8	New Jersey.....	12.1
Calcium lights.....	52,216	Illinois.....	51.2	Indiana.....	.....	Missouri.....	.....
Candles.....	3,130,521	New York.....	53.3	Illinois.....	.....	Louisiana.....	.....
Canning and preserving.....	157,101,201	California.....	21.0	New York.....	12.1	Maryland.....	8.7
Card cutting and designing.....	1,031,392	New York.....	47.5	Pennsylvania.....	17.7	New Jersey.....	9.2
Carpets and rugs, other than rag.....	71,188,152	New York.....	36.0	Pennsylvania.....	34.9	Massachusetts.....	18.0
Carpets, rag.....	2,567,569	Pennsylvania.....	21.8	Illinois.....	13.3	New York.....	11.1
Carriages and sleds, children's.....	8,805,129	Ohio.....	22.5	Massachusetts.....	10.9	Indiana.....	12.9
Carriages and wagons and materials.....	159,892,547	Ohio.....	13.7	Indiana.....	13.5	Illinois.....	10.5
Cars and general shop construction and repairs by steam-railroad companies.....	405,600,727	Pennsylvania.....	18.7	Illinois.....	7.9	Ohio.....	7.1
Cars and general shop construction and repairs by street-railroad companies.....	31,962,561	New York.....	20.8	Illinois.....	10.8	California.....	9.4
Cars, steam-railroad, not including operations of railroad companies.....	123,729,627	Pennsylvania.....	22.2	Illinois.....	21.8	Indiana.....	7.7
Cars, street-railroad, not including operations of railroad companies.....	7,809,866	Pennsylvania.....	.....	Ohio.....	25.0	Missouri.....	.....

SUMMARY, BY STATES AND DIVISIONS.

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 7—Continued.

INDUSTRY.	VALUE OF PRODUCTS: 1909							
	Total for United States.	State ranking—				Per cent of United States total.	Per cent of United States total.	
		First.		Second.				Third.
		Name.	Per cent of United States total.	Name.	Per cent of United States total.			Name.
Cash registers and calculating machines.....	\$23,708,326	Ohio.....	.....	Michigan.....	.....	Illinois.....	10.3
Cement.....	63,205,455	Pennsylvania.....	29.8	Indiana.....	11.1	California.....	8.1	
Charcoal.....	872,522	Michigan.....	29.6	Alabama.....	29.6	Illinois.....	13.6	
Chemicals.....	117,688,887	New York.....	30.0	New Jersey.....	19.4	Pennsylvania.....	16.7	
China decorating.....	786,293	Illinois.....	38.7	New Jersey.....	29.2	New York.....	21.5	
Chocolate and cocoa products.....	22,390,222	Massachusetts.....	.....	New York.....	26.0	Pennsylvania.....	17.6
Clocks and watches, including cases and materials.....	35,196,842	Connecticut.....	21.0	Illinois.....	20.0	New York.....	7.7	
Cloth, sponging and refinishing.....	1,543,872	New York.....	66.7	Pennsylvania.....	9.2	Illinois.....	22.7	
Clothing, horse.....	4,134,864	Wisconsin.....	30.9	Ohio.....	.....	Pennsylvania.....	6.3
Clothing, men's, buttonholes.....	780,720	New York.....	70.3	Ohio.....	9.8	Maryland.....	7.0	
Clothing, men's, including shirts.....	568,076,635	New York.....	46.8	Illinois.....	15.8	Pennsylvania.....	5.1	
Clothing, women's.....	384,751,649	New York.....	70.8	Pennsylvania.....	8.5	Ohio.....	10.9	
Coffee and spice, roasting and grinding.....	110,532,787	Illinois.....	17.9	New York.....	15.8	Missouri.....	11.2	
Coffins, burial cases, and undertakers' goods.....	24,525,905	New York.....	15.4	Ohio.....	12.5	Pennsylvania.....	7.9	
Coke.....	95,666,622	Pennsylvania.....	54.1	Alabama.....	9.2	West Virginia.....	10.0	
Confectionery.....	134,795,913	New York.....	18.9	Massachusetts.....	11.3	Pennsylvania.....	7.7	
Cooperage and wooden goods, not elsewhere specified.....	60,248,260	New York.....	12.5	Illinois.....	11.0	Pennsylvania.....	9.6	
Copper, tin, and sheet-iron products.....	199,824,218	New York.....	19.2	Illinois.....	11.4	Ohio.....	13.5	
Cordage and twine and jute and linen goods.....	61,019,986	Massachusetts.....	27.3	New York.....	26.0	Georgia.....	12.9	
Cordials and syrups.....	9,662,176	Illinois.....	29.7	New York.....	.....	Illinois.....	13.3
Cork, cutting.....	5,939,938	Pennsylvania.....	49.9	New York.....	30.6	New Jersey.....	13.1	
Corsets.....	33,257,187	Connecticut.....	38.5	New York.....	15.5	Michigan.....	10.5	
Cotton goods, including cotton small wares.....	628,391,813	Massachusetts.....	29.7	North Carolina.....	11.6	South Carolina.....	15.1	
Cruibles.....	1,849,326	Pennsylvania.....	39.3	New Jersey.....	.....	Connecticut.....	11.1
Cutlery and tools, not elsewhere specified.....	53,265,757	Massachusetts.....	21.8	Connecticut.....	20.1	Pennsylvania.....	14.7	
Dairymen's, poultryers', and apiarists' supplies.....	15,463,492	New York.....	27.2	Iowa.....	12.7	Pennsylvania.....	14.7	
Dentists' materials.....	10,835,553	New York.....	47.2	Pennsylvania.....	25.3	Connecticut.....	14.7	
Drug grinding.....	6,006,999	New Jersey.....	45.4	Maryland.....	.....	New York.....	16.7
Dyeing and finishing textiles.....	83,556,432	Massachusetts.....	26.2	New Jersey.....	18.9	Rhode Island.....	14.7	
Dyestuffs and extracts.....	15,954,574	New York.....	28.2	New Jersey.....	19.6	Pennsylvania.....	12.8	
Electrical machinery, apparatus, and supplies.....	221,308,563	New York.....	22.3	Pennsylvania.....	14.2	New Jersey.....	15.0	
Electroplating.....	4,509,559	New York.....	24.8	Illinois.....	15.4	Massachusetts.....	17.2	
Emery and other abrasive wheels.....	6,710,666	New York.....	38.2	Massachusetts.....	29.5	New Jersey.....	13.2	
Enameling and japanning.....	3,315,694	Wisconsin.....	.....	Pennsylvania.....	19.7	Rhode Island.....	6.9
Engravers' materials.....	920,727	New York.....	35.7	Illinois.....	.....	New Jersey.....	8.1
Engraving and diesinking.....	2,249,861	New York.....	30.4	Illinois.....	18.1	Rhode Island.....	8.7	
Engraving, wood.....	711,279	Illinois.....	45.6	New York.....	27.7	Pennsylvania.....	7.9	
Explosives.....	40,139,661	New Jersey.....	.....	Pennsylvania.....	15.9	California.....	11.6
Fancy articles, not elsewhere specified.....	22,632,199	New York.....	34.7	Massachusetts.....	29.2	New Jersey.....	8.1	
Fertilizers.....	103,960,213	Georgia.....	16.2	Maryland.....	9.3	South Carolina.....	7.9	
Files.....	5,691,203	Pennsylvania.....	27.1	New Jersey.....	10.0	Rhode Island.....	21.8	
Firearms and ammunition.....	34,111,564	Connecticut.....	58.5	Massachusetts.....	.....	New York.....	12.6
Fire extinguishers, chemical.....	754,165	New York.....	35.7	Missouri.....	16.7	Massachusetts.....	10.6	
Fireworks.....	2,269,349	New York.....	33.0	New Jersey.....	23.0	Michigan.....	7.7	
Flags, banners, regalia, society badges, and emblems.....	8,113,989	Ohio.....	37.3	New York.....	.....	Illinois.....	8.6
Flavoring extracts.....	8,828,034	New York.....	20.0	Ohio.....	11.4	Illinois.....	11.9	
Flax and hemp, dressed.....	467,346	Minnesota.....	.....	Kentucky.....	43.6	North Dakota.....	7.6
Flour-mill and gristmill products.....	883,584,405	Minnesota.....	15.7	New York.....	7.9	Kansas.....	8.6	
Food preparations.....	125,331,181	Minnesota.....	13.8	Michigan.....	9.2	Ohio.....	13.4	
Foundry and machine-shop products.....	1,228,475,148	New York.....	17.2	New York.....	12.6	Ohio.....	13.4	
Foundry supplies.....	2,297,690	Ohio.....	31.6	Pennsylvania.....	27.2	Illinois.....	4.1	
Fuel, manufactured.....	311,010	Pennsylvania.....	.....	New York.....	.....	New Jersey.....	8.2
Fur goods.....	55,937,549	New York.....	73.8	Minnesota.....	6.8	Michigan.....	11.6	
Furnishing goods, men's.....	87,710,197	New York.....	48.1	Massachusetts.....	13.7	Illinois.....	7.6	
Furniture and refrigerators.....	239,886,506	New York.....	17.5	Michigan.....	11.9	Illinois.....	12.1	
Furs, dressed.....	2,390,959	New York.....	51.8	New Jersey.....	26.2	Minnesota.....	12.8	
Galvanizing.....	7,338,330	Ohio.....	32.2	West Virginia.....	.....	Missouri.....	9.5
Gas and electric fixtures and lamps and reflectors.....	45,057,372	New York.....	28.9	Illinois.....	12.9	New Jersey.....	12.6	
Gas, illuminating and heating.....	166,814,371	New York.....	25.4	Illinois.....	12.6	Pennsylvania.....	.....
Glass.....	92,095,203	Pennsylvania.....	35.6	Ohio.....	15.6	Indiana.....	12.1	
Glass, cutting, staining, and ornamenting.....	16,101,129	New York.....	30.1	Pennsylvania.....	23.2	Illinois.....	10.7	
Gloves and mittens, leather.....	23,630,598	New York.....	60.7	Wisconsin.....	11.8	Illinois.....	14.9	
Glucose and starch.....	48,799,311	Illinois.....	.....	Iowa.....	.....	New Jersey.....	.....
Glue.....	13,717,820	Illinois.....	27.5	New York.....	21.8	Pennsylvania.....	.....
Gold and silver, leaf and foil.....	2,630,500	New York.....	34.9	Pennsylvania.....	15.9	Rhode Island.....	18.5	
Gold and silver, reducing and refining, not from the ore.....	23,611,764	Connecticut.....	.....	Rhode Island.....	18.8	New Jersey.....	19.5
Graphite and graphite refining.....	1,139,587	New York.....	.....	Michigan.....	.....	Pennsylvania.....	14.2
Grease and tallow.....	23,419,395	Illinois.....	23.9	New York.....	15.1	Pennsylvania.....	.....
Grindstones.....	1,688,171	Ohio.....	88.8	Michigan.....	.....	Maine.....	.....
Haircloth.....	2,230,033	Pennsylvania.....	.....	Rhode Island.....	.....	New York.....	2.1
Hair work.....	11,216,175	New York.....	70.1	Illinois.....	18.9	Pennsylvania.....	11.2	
Hammocks.....	578,505	Pennsylvania.....	67.2	Massachusetts.....	.....	Wisconsin.....	9.0
Hand stamps and stencils and brands.....	3,673,025	New York.....	19.5	Illinois.....	13.0	Pennsylvania.....	16.8	
Hat and cap materials.....	8,236,319	New York.....	46.6	Connecticut.....	18.3	New Jersey.....	7.6	
Hats and caps, other than felt, straw, and wool.....	13,689,338	New York.....	57.2	Pennsylvania.....	8.0	Illinois.....	21.3	
Hats, fur-felt.....	47,864,630	Pennsylvania.....	27.2	Connecticut.....	21.7	New York.....	15.6	
Hats, straw.....	21,424,255	New York.....	35.6	Massachusetts.....	30.8	Maryland.....	.....
Hones and whetstones.....	267,932	New Hampshire.....	.....	Vermont.....	.....	New Jersey.....	8.3
Horseshoes, not made in steel works or rolling mills.....	1,014,576	New Jersey.....	.....	Massachusetts.....	.....	Pennsylvania.....	7.4
Hosiery and knit goods.....	200,143,527	New York.....	33.5	Pennsylvania.....	24.8	Massachusetts.....	.....

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 7—Continued.

INDUSTRY.	VALUE OF PRODUCTS: 1909						
	Total for United States.	State ranking—				Per cent of United States total.	
		First.		Second.			Third.
		Name.	Per cent of United States total.	Name.	Per cent of United States total.		
House-furnishing goods, not elsewhere specified	\$18,508,896	New York	42.1	Pennsylvania	8.5	Ohio	8.4
Ice, manufactured	42,953,055	Pennsylvania	11.2	Texas	8.9	New York	8.9
Ink, printing	8,865,504	New York	45.8	Ohio	21.5	Pennsylvania	11.8
Ink, writing	2,505,414	Massachusetts	29.7	New York	29.7	Illinois	9.9
Instruments, professional and scientific	10,503,601	New York	31.5	Illinois	16.8	Pennsylvania	9.9
Iron and steel, blast furnaces	391,429,233	Pennsylvania	43.1	Ohio	21.4	Illinois	9.8
Iron and steel, steel works and rolling mills	985,722,534	Pennsylvania	50.8	Ohio	20.1	Illinois	8.8
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	24,484,907	Ohio	25.6	Pennsylvania	20.9	New York	12.1
Iron and steel, doors and shutters	3,005,635	New York	45.0	Illinois	19.3	Ohio	14.4
Iron and steel forgings	20,233,440	Pennsylvania	23.9	Ohio	19.9	New York	12.6
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	8,191,620	Massachusetts	35.7	Connecticut	14.3	Illinois	14.3
Iron and steel pipe, wrought	30,856,270	Pennsylvania	59.2	West Virginia	11.1	Ohio	11.1
Jewelry	80,349,874	Rhode Island	25.7	New York	25.3	Massachusetts	13.9
Jewelry and instrument cases	3,116,519	New York	57.1	New Jersey	12.7	Massachusetts	9.5
Kaolin and ground earths	4,680,548	New Jersey	16.8	Pennsylvania	16.2	New York	15.8
Labels and tags	4,669,965	New York	29.8	Illinois	17.6	Pennsylvania	17.5
Lapidary work	9,172,832	New York	94.4	California	3.2	Illinois	1.0
Lard, refined, not made in slaughtering and meat-packing establishments	10,326,471	Illinois	22.6	New Jersey	13.9	Maryland	8.0
Lasts	4,158,933	Massachusetts	45.9	New York	13.9	Ohio	12.6
Lead, bar, pipe, and sheet	9,144,930	New York	22.6	Illinois	13.9	Massachusetts	12.6
Leather goods	104,719,008	New York	20.0	Illinois	8.5	Missouri	6.2
Leather, tanned, curried, and finished	327,874,137	Pennsylvania	23.8	Wisconsin	13.6	Massachusetts	12.2
Lime	17,951,987	Pennsylvania	18.6	Ohio	9.0	Wisconsin	7.1
Liquors, distilled	204,699,412	Illinois	27.0	Kentucky	21.7	Indiana	15.4
Liquors, malt	374,730,096	New York	29.7	Pennsylvania	12.7	Wisconsin	8.6
Liquors, vinous	13,120,846	California	68.1	New York	13.8	Ohio	9.9
Locomotives, not made by railroad companies	31,532,302	Pennsylvania	23.8	New York	26.4	Ohio	7.2
Looking-glass and picture frames	13,475,082	Illinois	33.5	New York	26.4	Pennsylvania	7.2
Lumber and timber products	1,156,128,747	Washington	7.7	New York	6.3	Louisiana	5.4
Malt	38,252,233	New York	23.9	Wisconsin	25.1	Illinois	24.9
Marble and stone work	113,092,967	New York	15.8	Vermont	11.0	Pennsylvania	10.2
Matches	11,353,133	Ohio	60.7	Wisconsin	9.2	New York	8.0
Mats and matting	2,431,615	Minnesota	16.5	Wisconsin	8.5	Massachusetts	8.0
Mattresses and spring beds	35,783,154	New York	60.7	Ohio	9.2	Illinois	8.0
Millinery and lace goods	85,893,632	New York	60.7	Illinois	8.5	New Jersey	8.0
Millstones	43,508,464	Illinois	100.0	Illinois	9.3	Illinois	7.0
Mineral and soda waters	9,570,797	New York	17.1	Pennsylvania	11.6	North Carolina	8.2
Mirrors	8,368,166	New York	34.1	Illinois	23.5	Illinois	10.0
Models and patterns, not including paper patterns	4,206,448	New York	27.7	Pennsylvania	30.9	Illinois	10.0
Moving pictures	4,913,341	New Jersey	32.8	New York	27.1	Pennsylvania	17.1
Mucilage and paste	3,223,108	New York	19.7	Illinois	19.5	Indiana	13.9
Musical instruments and materials, not specified	89,789,544	Illinois	37.5	Illinois	21.4	Massachusetts	10.1
Musical instruments, pianos and organs and materials	6,694,095	Connecticut	63.3	Pennsylvania	21.4	New Jersey	9.3
Needles, pins, and hooks and eyes	338,497	New Jersey	33.6	Maryland	25.0	California	17.1
Oakum	904,825	New Jersey	20.2	Missouri	16.0	Massachusetts	10.8
Oil, castor	147,867,894	Texas	28.0	Georgia	16.0	Mississippi	10.8
Oil, cottonseed, and cake	1,737,234	Michigan	41.9	New Jersey	30.0	Connecticut	9.9
Oil, essential	36,733,694	New York	33.6	Minnesota	25.4	Ohio	9.9
Oil, linseed	30,865,122	Pennsylvania	43.5	New Jersey	20.0	New York	9.7
Oil, not elsewhere specified	23,339,022	New Jersey	43.5	Pennsylvania	27.1	New York	15.1
Oilcloth and linoleum	8,147,029	Illinois	34.1	Rhode Island	16.0	Ohio	15.1
Oleomargarine	11,734,811	New York	34.1	Massachusetts	26.1	Pennsylvania	9.1
Optical goods	124,889,422	Massachusetts	22.8	Pennsylvania	16.4	Pennsylvania	11.2
Ordnance and accessories	207,656,964	New York	18.3	Illinois	15.0	Pennsylvania	12.7
Paint and varnish	55,170,564	Massachusetts	24.5	Massachusetts	22.0	Maine	11.4
Paper and wood pulp	2,610,714	New York	83.0	New York	26.3	Illinois	1.4
Paper goods, not elsewhere specified	141,941,602	New York	26.3	Michigan	9.5	Illinois	9.2
Paper patterns	6,229,400	New Jersey	81.5	New York	13.7	Illinois	8.0
Patent medicines and compounds and druggists' preparations	9,736,551	Virginia	67.9	Missouri	22.4	Pennsylvania	7.1
Paving materials	7,373,744	New Jersey	67.9	New York	22.4	Pennsylvania	7.1
Peanuts, grading, roasting, cleaning, and shelling	4,735,633	New York	67.9	Ohio	9.9	Pennsylvania	7.1
Pencils, lead	576,696	New Jersey	67.9	Pennsylvania	22.4	Connecticut	7.1
Pens, fountain, stylographic, and gold	236,997,659	New Jersey	67.9	Pennsylvania	22.4	Connecticut	7.1
Pens, steel	11,725,996	New Jersey	67.9	Pennsylvania	22.4	New York	7.1
Petroleum, refining	22,661,341	New York	83.2	Connecticut	15.0	New York	12.7
Phonographs and graphophones	11,634,000	New York	25.0	Missouri	6.3	Illinois	3.3
Photographic apparatus and materials	22,661,341	New York	25.0	Illinois	23.0	Pennsylvania	9.7
Photo-engraving	5,311,900	New York	60.5	Illinois	20.9	Illinois	9.2
Pipes, tobacco	70,118,861	Ohio	27.8	New Jersey	17.3	Missouri	7.4
Pottery, terra-cotta, and fire-clay products	737,876,087	Ohio	29.4	New Jersey	11.8	Pennsylvania	17.2
Printing and publishing	1,770,107	New York	100.0	Illinois	11.8	Pennsylvania	9.6
Pulp, from fiber other than wood	5,532,932	Pennsylvania	58.3	Illinois	11.8	Pennsylvania	9.6
Pulp goods	22,371,457	Delaware	49.2	New York	14.6	Maine	11.8
Pumps, not including steam pumps	19,204,423	Ohio	54.0	New York	35.4	Illinois	11.8
Rice, cleaning and polishing	123,435,747	Louisiana	54.0	Texas	35.4	Arkansas	4.2
Roofing materials	143,811	Ohio	29.3	Illinois	17.6	Pennsylvania	17.4
Rubber goods, not elsewhere specified	8,490,541	Ohio	42.0	New Jersey	15.2	Massachusetts	12.3
Rules, ivory and wood	143,811	Ohio	79.4	Ohio	15.8	Connecticut	12.3
Safes and vaults	11,327,334	Ohio	64.6	Pennsylvania	23.6	New York	15.0
Salt	11,327,334	Michigan	32.2	New York	23.6	Ohio	15.0

SUMMARY, BY STATES AND DIVISIONS

THREE LEADING STATES IN EACH INDUSTRY AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 7—Continued.

INDUSTRY.	Total for United States.	VALUE OF PRODUCTS: 1909					
		State ranking—					
		First.		Second.		Third.	
		Name.	Per cent of United States total.	Name.	Per cent of United States total.	Name.	Per cent of United States total.
Sand and emery paper and cloth.....	\$4,357,792	Pennsylvania.....	49.0	New York.....		Massachusetts.....	
Saws.....	11,535,631	Pennsylvania.....	32.9	Indiana.....		Illinois.....	
Scales and balances.....	8,785,642	Ohio.....		Vermont.....		New York.....	15.4
Screws, machine.....	3,014,112	Connecticut.....		Ohio.....	19.8	Massachusetts.....	18.9
Screws, wood.....	6,198,955	Rhode Island.....		Connecticut.....		Massachusetts.....	
Sewing machines, cases, and attachments.....	28,262,416	Indiana.....		Ohio.....	21.1	Connecticut.....	7.5
Shipbuilding, including boat building.....	73,360,315	New York.....	15.6	New Jersey.....	12.0	Virginia.....	
Shoddy.....	7,446,364	Pennsylvania.....	27.5	Massachusetts.....	23.7	Ohio.....	16.9
Show cases.....	7,167,100	Michigan.....	26.0	New York.....	12.6	Illinois.....	11.6
Signs and advertising novelties.....	13,546,385	Illinois.....	24.1	Ohio.....	19.2	New Jersey.....	15.4
Silk and silk goods, including throwsters.....	196,911,667	New Jersey.....	33.2	Pennsylvania.....	31.5	New York.....	13.5
Silverware and plated ware.....	42,228,547	Connecticut.....	37.5	New York.....	18.6	Massachusetts.....	15.5
Slaughtering and meat packing.....	1,370,568,101	Illinois.....	28.4	Kansas.....	12.1	New York.....	9.3
Smelting and refining, copper.....	378,805,974	New Jersey.....	33.2	New York.....		Montana.....	
Smelting and refining, lead.....	167,405,650	California.....		Nebraska.....		Colorado.....	
Smelting and refining, zinc.....	34,205,894	Kansas.....	31.7	Illinois.....	26.3	Pennsylvania.....	
Smelting and refining, not from the ore.....	28,072,041	New Jersey.....	34.2	New York.....	32.1	Illinois.....	14.0
Soap.....	111,357,777	New York.....	21.2	Illinois.....	18.1	Ohio.....	15.3
Soda-water apparatus.....	6,555,597	Illinois.....	47.8	Massachusetts.....	20.2	Pennsylvania.....	8.9
Sporting and athletic goods.....	11,052,286	Pennsylvania.....	24.5	Massachusetts.....	22.7	Illinois.....	14.2
Springs, steel, car and carriage.....	9,005,362	Pennsylvania.....	41.3	Illinois.....	15.2	Michigan.....	14.5
Stationery goods, not elsewhere specified.....	16,647,223	Massachusetts.....	27.2	New York.....	20.1	Ohio.....	14.6
Statuary and art goods.....	3,441,546	New York.....	28.8	Illinois.....	22.8	Massachusetts.....	8.4
Steam packing.....	12,159,989	Pennsylvania.....	41.0	New York.....	31.1	Wisconsin.....	
Stereotyping and electrotyping.....	6,383,694	New York.....	34.9	Illinois.....	20.1	Pennsylvania.....	16.1
Stoves and furnaces, including gas and oil stoves.....	78,853,323	Ohio.....	19.5	Illinois.....	13.0	Michigan.....	11.6
Straw goods, not elsewhere specified.....		Wisconsin.....		Massachusetts.....		Illinois.....	
Sugar and molasses.....	30,620,738	Louisiana.....	94.7	Texas.....	2.8	Illinois.....	
Sugar, refining, not including beet sugar.....	248,628,659	New York.....		Pennsylvania.....		Louisiana.....	14.0
Sulphuric, nitric, and mixed acids.....	9,884,057	New Jersey.....	21.5	New York.....		Illinois.....	
Surgical appliances and artificial limbs.....	12,399,314	Pennsylvania.....		New Jersey.....	24.1	Illinois.....	16.9
Tin plate and ternplate.....	47,969,645	Pennsylvania.....	52.6	West Virginia.....	19.3	Ohio.....	16.4
Tin foil.....	3,418,818	New York.....		Missouri.....		Illinois.....	
Tobacco manufactures.....	416,695,104	New York.....	18.4	Pennsylvania.....	12.0	North Carolina.....	8.6
Toys and games.....	8,264,135	New York.....	22.4	Massachusetts.....	21.2	Pennsylvania.....	16.3
Turpentine and rosin.....	25,295,017	Florida.....	47.2	Georgia.....	27.4	Alabama.....	9.8
Type founding and printing materials.....	4,703,506	Illinois.....	26.5	New York.....	17.5	New Jersey.....	
Typewriters and supplies.....	19,718,767	New York.....	52.2	Connecticut.....	20.4	Illinois.....	
Umbrellas and canes.....	15,864,122	New York.....	40.5	Pennsylvania.....	31.9	Maryland.....	16.4
Upholstering materials.....	13,053,561	Pennsylvania.....	15.6	Illinois.....	15.2	New York.....	14.7
Vault lights and ventilators.....	956,720	Illinois.....	35.7	New York.....	34.3	Pennsylvania.....	22.3
Vinegar and cider.....	8,447,770	New York.....	26.6	Michigan.....	11.5	Pennsylvania.....	8.3
Wall paper.....	14,449,247	New York.....	36.5	Pennsylvania.....	25.6	New Jersey.....	19.9
Wall plaster.....	12,803,758	New York.....	35.1	Michigan.....	11.1	Ohio.....	7.3
Washing machines and clothes wringers.....	5,824,889	Rhode Island.....		Iowa.....	19.2	Pennsylvania.....	17.2
Waste.....	11,398,011	Massachusetts.....	29.3	Pennsylvania.....	15.4	New York.....	12.0
Whalebone cutting.....		New York.....	100.0	Minnesota.....		Ohio.....	12.7
Wheelbarrows.....	1,625,478	Michigan.....		Ohio.....	8.8	New York.....	8.6
Whips.....	3,948,643	Massachusetts.....	70.3	Indiana.....	20.9	Wisconsin.....	11.5
Windmills.....	6,676,599	Illinois.....	61.2				
Window shades and fixtures.....	18,570,932	New York.....	29.5	Illinois.....	25.1	Michigan.....	7.6
Wire.....	84,486,518	New Jersey.....	34.2	Illinois.....		New York.....	11.9
Wirework, including wire rope and cable.....	41,937,952	New York.....	14.0	Michigan.....	12.6	Ohio.....	8.6
Wood carpet.....	490,389	New York.....	63.4	Pennsylvania.....		Iowa.....	
Wood distillation, not including turpentine and rosin.....	9,736,998	New York.....	34.9	Pennsylvania.....	30.4	Michigan.....	24.6
Wood preserving.....	14,098,978	Texas.....	27.4	Illinois.....	12.3	Mississippi.....	9.7
Wood, turned and carved.....	22,198,572	Ohio.....	11.1	New York.....	10.9	Maine.....	8.4
Wool pulling.....	5,180,856	Indiana.....		Massachusetts.....		Washington.....	
Wool scouring.....	3,289,215	Illinois.....		Massachusetts.....	19.2	New Jersey.....	
Woolen, worsted, and felt goods, and wool hats.....	435,978,558	Massachusetts.....	32.6	Pennsylvania.....	17.8	Rhode Island.....	17.1

Table 8 summarizes the preceding table by showing the number of industries in which each state held first place among the states in 1909 as measured by value of products, and also the number in which it held second and third place, respectively. Of course there are some states that occupy neither first, second, nor third place in any industry. For convenience, the rank of each state in value of products for all manufacturing industries combined is also shown.

The importance of New York as a manufacturing state is brought out clearly by the fact that in 104 industries, or practically two-fifths of the 264 industries distinguished by the Bureau of the Census, it held first place, on the basis of value of products, in 1909, while in 177 industries, or slightly more than two-thirds of the total, it ranked either first, second, or third. Pennsylvania and Illinois ranked either first, second, or third in 114 and 111 industries, respectively.

Table 8

STATE.	Rank of state in 1909 in value of products.	NUMBER OF INDUSTRIES IN WHICH THE STATE'S RANK AS TO VALUE OF PRODUCTS IN 1909 WAS—		
		First.	Second.	Third.
New York.....	1	104	45	23
Pennsylvania.....	2	35	37	42
Illinois.....	3	24	44	43
Massachusetts.....	4	19	22	18
Ohio.....	5	17	21	30
New Jersey.....	6	21	19	21
Michigan.....	7	6	11	9
Wisconsin.....	8	4	5	5
Indiana.....	9	2	5	5
Missouri.....	10	1	8	6
California.....	11	3	2	5
Connecticut.....	12	8	8	7
Minnesota.....	13	3	4	1
Kansas.....	14	1	1	1
Maryland.....	15	3	3	6
Rhode Island.....	16	3	3	7
Texas.....	17	2	3	6
Iowa.....	18	1	5	2
Louisiana.....	19	2	2	4
Kentucky.....	20	2	2	4
Washington.....	21	1	1	1
Virginia.....	22	1	1	1
North Carolina.....	23	1	1	2
Georgia.....	24	1	2	1
Nebraska.....	25	1	1	1
Tennessee.....	26	1	1	1
Maine.....	27	1	1	4
New Hampshire.....	28	1	1	1
West Virginia.....	29	1	3	1
Alabama.....	30	1	2	1
Colorado.....	31	1	1	1
South Carolina.....	32	1	1	2
Oregon.....	33	1	1	2
Mississippi.....	34	1	1	1
Arkansas.....	35	1	1	1
Montana.....	36	1	1	1
Florida.....	37	1	1	1
Vermont.....	38	1	3	1
Utah.....	39	1	1	1
Oklahoma.....	40	1	1	1
Delaware.....	41	1	1	1
Arizona.....	42	1	1	1
District of Columbia.....	43	1	1	1
Idaho.....	44	1	1	1
North Dakota.....	45	1	1	1
South Dakota.....	46	1	1	1
Nevada.....	47	1	1	1
New Mexico.....	48	1	1	1
Wyoming.....	49	1	1	1

basis of value of products, in each of the 20 leading industries of the country.

Table 9

INDUSTRY.	VALUE OF PRODUCTS.		
	United States.	New York.	
		Amount.	Rank among the states.
Slaughtering and meat packing.....	\$1,370,568,101	\$127,130,051	3
Foundry and machine-shop products.....	1,223,478,148	154,370,846	2
Lumber and timber products.....	1,156,128,747	72,529,813	2
Iron and steel, steel works and rolling mills.....	985,722,534	39,532,414	4
Flour-mill and gristmill products.....	833,584,405	68,802,278	2
Printing and publishing.....	737,876,087	216,946,452	1
Cotton goods, including cotton small wares.....	623,391,813	20,351,555	11
Clothing, men's, including shirts.....	563,076,635	266,075,427	1
Boots and shoes, including cut stock and findings.....	512,797,642	48,185,914	3
Woolen, worsted, and felt goods, and wool hats.....	435,978,558	23,739,421	5
Tobacco manufactures.....	416,695,104	76,601,552	1
Cars and general shop construction and repairs by steam-railroad companies.....	405,600,727	21,726,491	4
Bread and other bakery products.....	396,864,844	86,232,985	1
Iron and steel, blast furnaces.....	391,429,283	26,620,948	4
Clothing, women's.....	384,751,649	272,517,792	1
Smelting and refining, copper.....	378,805,974	77,720,045	1
Liquors, malt.....	374,730,096	27,642,383	5
Leather, tanned, curried, and finished.....	327,874,187	42,458,345	2
Butter, cheese, and condensed milk.....	274,557,713	48,859,010	1
Paper and wood pulp.....	267,656,964	48,859,010	1

Figures can not be shown without disclosing individual operations.

Of the 20 industries shown in the above table, New York ranked first in 7, second in 5, third in 2, fourth in 3, fifth in 2, and eleventh in 1.

Table 10, which is derived from Table 7, shows for each state that ranked first in at least one industry the industries in which it ranked first, and those, if any, in which it ranked second and third, respectively, as measured by value of products, in 1909, and also the percentage which it contributed of the total value of products for those industries in the country as a whole.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909.

Table 10 (pp. 70-76). INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
Artificial flowers and feathers and plumes.....	88.2	Agricultural implements.....	10.2	Artists' materials.....	15.6
Awnings, tents, and sails.....	15.3	Baking powders and yeast.....	(1)	Automobiles, including bodies and parts.....	12.4
Axle grease.....	35.1	Boxes, cigar.....	26.3	Bluing.....	12.4
Babbitt metal and solder.....	31.0	Brass and bronze products.....	14.8	Boots and shoes, including cut stock and findings.....	9.4
Bags, paper.....	35.8	Butter, cheese, and condensed milk.....	15.5	Carpets, rag.....	11.1
Baskets, and rattan and willow ware.....	34.2	Canning and preserving.....	26.0	China decorating.....	16.7
Bolting and hose, leather.....	27.1	Chocolate and cocoa products.....	26.0	Clocks and watches, including cases and materials.....	17.6
Billiard tables and materials.....	(1)	Coffee and spice, roasting and grinding.....	15.8	Drug grinding.....	14.7
Blackening and cleansing and polishing preparations.....	26.1	Cordage and twine and jute and linen goods.....	20.0	Firearms and ammunition.....	7.0
Boxes, fancy and paper.....	26.1	Cordials and sirups.....	26.0	Haircloth.....	(1)
Bread and other bakery products.....	21.7	Cork, cutting.....	15.5	Hats, fur-felt.....	21.4
Brooms.....	15.3	Corsets.....	27.7	Ice, manufactured.....	8.9
Brushes.....	27.7	Engraving, wood.....	23.0	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	12.1
Buttons.....	41.3	Flags, banners, regalia, society badges, and emblems.....	7.9	Iron and steel forgings.....	12.6
Candles.....	63.3	Flour-mill and gristmill products.....	12.6	Kaolin and ground earths.....	15.8
Card cutting and designing.....	47.5	Foundry and machine-shop products.....	(1)	Matches.....	(1)
Carpets and rugs, other than rag.....	36.0	Fuel, manufactured.....	21.8	Oil, not elsewhere specified.....	9.7
Cars and general shop construction and repairs by street-railroad companies.....	20.8	Glue.....	15.1	Oilcloth and linoleum.....	15.1
Chemicals.....	30.0	Grease and tallow.....	29.7	Petroleum, refining.....	(1)
Cloth, sponging and refinishing.....	66.7	Ink, writing.....	25.3		
		Jewelry.....	25.3		

Figures can not be shown without disclosing individual operations.

SUMMARY, BY STATES AND DIVISIONS.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued. INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.

NEW YORK—Continued.

Clothing, men's, buttonholes.....	70.3	Lasts.....	18.9	Phonographs and graphophones.....	(1)
Clothing, men's, including shirts.....	46.8	Liquors, vinous.....	13.8	Safes and vaults.....	(1) 13.4
Clothing, women's.....	70.8	Locomotives, not made by railroad companies.....	(1)	Scales and balances.....	13.4
Coffins, burial cases, and undertakers' goods.....	15.4	Looking-glass and picture frames.....	26.4	Silk and silk goods, including throwsters.....	9.3
Confectionery.....	19.0	Lumber and timber products.....	6.3	Slaughtering and meat packing.....	14.7
Cooperage and wooden goods, not elsewhere specified.....	12.5	Moving pictures.....	30.9	Upholstering materials.....	12.0
Copper, tin, and sheet-iron products.....	19.2	Mucilage and paste.....	27.1	Waste.....	8.6
Dairymen's, poultryers', and apiarists' supplies.....	27.2	Paper goods, not elsewhere specified.....	22.0	Whips.....	11.9
Dentists' materials.....	47.2	Paving materials.....	18.7	Wire.....	
Dyestuffs and extracts.....	28.2	Pencils, lead.....	(1)		
Electrical machinery, apparatus, and supplies.....	22.3	Pulp goods.....	(1)		
Electroplating.....	24.8	Pumps, not including steam pumps.....	14.6		
Emery and other abrasive wheels.....	38.2	Sand and emery paper and cloth.....	(1)		
Engravers' materials.....	35.7	Salt.....	25.6		
Engraving and diesinking.....	30.4	Show cases.....	12.6		
Fancy articles, not elsewhere specified.....	34.7	Silverware and plated ware.....	18.6		
Fire extinguishers, chemical.....	35.7	Smelting and refining, copper.....	(1)		
Fireworks.....	33.0	Smelting and refining, not from the ore.....	32.1		
Flavoring extracts.....	20.0	Stationery goods, not elsewhere specified.....	20.1		
Food preparations.....	13.8	Steam packing.....	31.1		
Fur goods.....	73.8	Sulphuric, nitric, and mixed acids.....	(1)		
Furnishing goods, men's.....	48.1	Type founding and printing materials.....	17.5		
Furniture and refrigerators.....	17.5	Vault lights and ventilators.....	34.3		
Furs, dressed.....	51.8	Wood, turned and carved.....	10.9		
Gas and electric fixtures and lamps and reflectors.....	28.9				
Gas, illuminating and heating.....	25.4				
Glass, cutting, staining, and ornamenting.....	30.1				
Gloves and mittens, leather.....	60.7				
Gold and silver, leaf and foil.....	34.9				
Graphite and graphite refining.....	(1)				
Hair work.....	70.1				
Hand stamps and stencils and brands.....	19.5				
Hat and cap materials.....	46.6				
Hats and caps, other than felt, straw, and wool.....	57.2				
Hats, straw.....	35.6				
Hosiery and knit goods.....	33.5				
House-furnishing goods, not elsewhere specified.....	42.1				
Ink, printing.....	45.8				
Instruments, professional and scientific.....	31.5				
Iron and steel, doors and shutters.....	45.0				
Jewelry and instrument cases.....	57.1				
Labels and tags.....	29.8				
Lapidary work.....	94.4				
Lead, bar, pipe, and sheet.....	22.6				
Leather goods.....	20.0				
Liquors, malt.....	20.7				
Malt.....	28.9				
Marble and stone work.....	15.8				
Mattresses and spring beds.....	16.5				
Millinery and lace goods.....	60.7				
Mineral and soda waters.....	17.1				
Mirrors.....	34.1				
Models and patterns, not including paper patterns.....	27.7				
Musical instruments, pianos and organs and materials.....	37.5				
Oil, linseed.....	41.9				
Optical goods.....	34.1				
Paint and varnish.....	22.9				
Paper and wood pulp.....	18.3				
Paper patterns.....	83.0				
Patent medicines and compounds and druggists' preparations.....	26.3				
Pens, fountain, stylographic, and gold.....	67.9				
Photographic apparatus and materials.....	83.2				
Photo-engraving.....	25.0				
Pipes, tobacco.....	60.5				
Printing and publishing.....	29.4				
Rules, ivory and wood.....	79.4				
Shipbuilding, including boat building.....	15.6				
Scap.....	21.2				
Statuary and art goods.....	28.8				
Stereotyping and electrotyping.....	34.9				
Sugar, refining, not including beet sugar.....	(1)				
Tin foil.....	(1)				
Tobacco manufactures.....	18.4				
Toys and games.....	22.4				
Typewriters and supplies.....	52.2				
Umbrellas and canes.....	40.5				
Vinegar and cider.....	26.6				
Wall paper.....	36.5				
Wall plaster.....	35.1				
Whalebone cutting.....	100.0				
Window shades and fixtures.....	29.5				
Wirework, including wire rope and cable.....	14.0				
Wood carpet.....	63.4				
Wood distillation, not including turpentine and rosin.....	34.9				

1 Figures can not be shown without disclosing individual operations.

MANUFACTURES.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
PENNSYLVANIA.					
Boxes, cigar	27.4	Artificial flowers and feathers and plumes	5.5	Babbitt metal and solder	10.7
Carpets, rag	21.8	Bone, carbon, and lamp black	(1)	Brick and tile	9.9
Cars and general shop construction and repairs by steam-railroad companies	18.7	Bread and other bakery products	11.6	Brooms	8.7
Cars, steam-railroad, not including operations of railroad companies	22.2	Card cutting and designing	17.7	Chemicals	13.6
Cars, street-railroad, not including operations of railroad companies	(1)	Carpets and rugs, other than rag	34.9	Chocolate and cocoa products	21.5
Cement	29.8	Cloth, sponging and refinishing	9.2	Clothing, horse	22.7
Coke	54.1	Clothing, women's	8.5	Clothing, men's, including shirts	7.0
Cork, cutting	49.9	Dentists' materials	25.3	Coffins, burial cases, and undertakers' goods	11.2
Crucibles	39.3	Electrical machinery, apparatus, and supplies	14.2	Confectionery	10.0
Files	27.1	Enameling and japanning	19.7	Cooperage and wooden goods, not elsewhere specified	7.7
Foundry and machine-shop products	17.2	Explosives	15.9	Cutlery and tools, not elsewhere specified	15.1
Fuel, manufactured	(1)	Foundry supplies	27.2	Dairymen's, poulterers', and apiarists' supplies	11.1
Glass	35.6	Glass, cutting, staining, and ornamenting	23.2	Dyestuffs and extracts	14.7
Haircloth	(1)	Gold and silver, leaf and foil	15.9	Engraving, wood	6.9
Hammocks	67.2	Hats and caps, other than felt, straw, and wool	8.0	Gas, illuminating and heating	9.5
Hats, fur-felt	27.2	Hosiery and knit goods	24.8	Glue	14.9
Ice, manufactured	11.2	House-furnishing goods, not elsewhere specified	8.5	Graphite and graphite refining	19.5
Iron and steel, blast furnaces	43.1	Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills	20.9	Grease and tallow	14.2
Iron and steel, steel works and rolling mills	50.8	Kaolin and ground carths	16.2	Hair work	2.1
Iron and steel forgings	28.9	Liquors, malt	12.7	Hand stamps and stencils and brands	9.0
Iron and steel pipe, wrought	59.2	Mineral and soda waters	9.3	Horseshoes, not made in steel works or rolling mills	8.3
Leather, tanned, curried, and finished	23.8	Models and patterns, not including paper patterns	23.5	Ink, printing	11.8
Lime	18.6	Needles, pins, and hooks and eyes	(1)	Instruments, professional and scientific	9.9
Locomotives, not made by railroad companies	(1)	Oilcloth and linoleum	(1)	Labels and tags	17.5
Oil, not elsewhere specified	33.6	Ordinance and accessories	(1)	Looking-glass and picture frames	7.2
Pulp, from fiber other than wood	100.0	Pens, steel	(1)	Marble and stone work	10.2
Sand and emery paper and cloth	49.0	Petroleum, refining	22.4	Mucilage and paste	17.1
Saws	32.9	Safes and vaults	15.3	Optical goods	9.1
Shoddy	27.5	Silk and silk goods, including throwsters	31.5	Paint and varnish	11.2
Sporting and athletic goods	24.5	Sugar, refining, not including beet sugar	(1)	Peanuts, grading, roasting, cleaning, and shelling	7.1
Springs, steel, car and carriage	41.3	Tobacco manufactures	12.0	Pencils, lead	(1)
Steam packing	41.0	Umbrellas and canes	31.9	Photo-engraving	9.7
Surgical appliances and artificial limbs	(1)	Wall paper	25.6	Pottery, terra-cotta, and fire-clay products	17.2
Tin plate and ternplate	52.6	Waste	15.4	Printing and publishing	9.6
Upholstering materials	15.6	Wood carpet	(1)	Roofing materials	17.4
		Wood distillation, not including turpentine and rosin	30.4	Smelting and refining, zinc	(1)
		Woolen, worsted, and felt goods, and wool hats	17.8	Soda-water apparatus	8.9
				Stereotyping and electrotyping	10.1
				Toys and games	10.3
				Vault lights and ventilators	22.8
				Vinegar and cider	8.3
				Washing machines and clothes wringers	17.2
ILLINOIS.					
Agricultural implements	29.1	Artificial stone	8.0	Artificial flowers and feathers and plumes	1.7
Baking powders and yeast	26.7	Artists' materials	18.0	Axle grease	11.7
Brick and tile	10.5	Babbitt metal and solder	21.0	Belting and hose, leather	9.2
Butter, reworking	(1)	Boxes, fancy and paper	11.7	Bicycles, motorcycles, and parts	16.6
Calcium lights	51.2	Brooms	10.2	Blacking and cleansing and polishing preparations	8.4
China decorating	33.7	Candles	(1)	Bread and other bakery products	9.1
Coffee and spice, roasting and grinding	17.9	Carpets, rag	13.3	Carriages and wagons and materials	10.5
Cordials and sirups	29.7	Cars and general shop construction and repairs by steam-railroad companies	7.9	Cash registers and calculating machines	(1)
Engraving, wood	45.6	Cars and general shop construction and repairs by street-railroad companies	10.8	Charcoal	8.1
Glucose and starch	(1)	Cars, steam-railroad, not including operations of railroad companies	21.8	Cloth, sponging and refinishing	7.7
Glue	27.5	Clocks and watches, including cases and materials	20.0	Cordage and twine and jute and linen goods	13.5
Grease and tallow	23.9	Clothing, men's, including shirts	15.8	Fire extinguishers, chemical	21.8
Lard, refined, not made in slaughtering and meat-packing establishments	(1)	Cooperage and wooden goods, not elsewhere specified	11.0	Flavoring extracts	10.6
Liquors, distilled	27.0	Copper, tin, and sheet-iron products	11.4	Foundry supplies	13.4
Looking-glass and picture frames	33.5	Electroplating	15.4	Furnishing goods, men's	8.2
Millstones	100.0	Engravers' materials	(1)	Furniture and refrigerators	11.6
Oleomargarine	(1)	Engraving and die-sinking	18.1	Glass, cutting, staining, and ornamenting	12.1
Signs and advertising novelties	24.1	Gas and electric fixtures and lamps and reflectors	12.9	Gloves and mittens, leather	10.7
Slaughtering and meat packing	28.4	Gas, illuminating and heating	12.6	Hats and caps, other than felt, straw, and wool	7.6
Soda-water apparatus	47.8	Hair work	18.9	Ink, writing	(1)
Type founding and printing materials	26.5	Hand stamps and stencils and brands	13.0	Iron and steel, blast furnaces	9.8
Vault lights and ventilators	35.7	Instruments, professional and scientific	16.8	Iron and steel, steel works and rolling mills	8.8
Windmills	61.2	Iron and steel, doors and shutters	19.3	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills	14.3
Wool scouring	(1)	Labels and tags	17.6	Lapidary work	1.0
		Lead, bar, pipe, and sheet	(1)	Malt	24.9
		Leather goods	8.5	Mattresses and spring beds	8.0
		Millinery and lace goods	8.5	Mineral and soda waters	7.0
		Mirrors	11.6	Models and patterns, not including paper patterns	10.0
				Moving pictures	(1)

¹ Figures can not be shown without disclosing individual operations.

SUMMARY, BY STATES AND DIVISIONS.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.

ILLINOIS—Continued.

		Musical instruments and materials, not specified.....	19.5	Paper patterns.....	1.4
		Musical instruments, pianos and organs and materials.....	21.4	Patent medicines and compounds and druggists' preparations.....	9.2
		Paint and varnish.....	16.4	Paving materials.....	8.0
		Photo-engraving.....	23.0	Photographic apparatus and materials.....	3.3
		Printing and publishing.....	11.8	Pumps, not including steam pumps.....	11.8
		Roofing materials.....	17.0	Saws.....	(1) 11.6
		Smelting and refining, zinc.....	26.3	Show cases.....	14.0
		Soap.....	18.1	Smelting and refining, not from the ore.....	14.2
		Springs, steel, car and carriage.....	15.3	Sporting and athletic goods.....	(1)
		Statuary and art goods.....	22.8	Sugar and molasses.....	(1)
		Stereotyping and electrotyping.....	20.1	Sulphuric, nitric, and mixed acids.....	(1)
		Stoves and furnaces, including gas and oil stoves.....	13.0	Surgical appliances and artificial limbs.....	16.9
		Upholstering materials.....	15.2	Tin foil.....	(1)
		Window shades and fixtures.....	25.1	Typewriters and supplies.....	(1)
		Wire.....	(1)		
		Wood preserving.....	12.3		

MASSACHUSETTS.

Bicycles, motorcycles, and parts.....	25.3	Belting and hose, leather.....	23.8	Boxes, fancy and paper.....	10.6
Bluing.....	(1)	Belting and hose, woven and rubber.....	(1)	Carpets and rugs, other than rag.....	18.0
Boots and shoes, including cut stock and findings.....	46.1	Blackening and cleansing and polishing preparations.....	25.3	Electroplating.....	15.0
Boots and shoes, rubber.....	37.7	Brushes.....	19.6	Fireworks.....	12.6
Chocolate and cocoa products.....	(1)	Carriages and sleds, children's.....	11.3	Hosiery and knit goods.....	7.4
Cordage and twine and jute and linen goods.....	27.3	Confectionery.....	19.9	Jewelry.....	18.9
Cotton goods, including cotton small wares.....	29.7	Emery and other abrasive wheels.....	29.5	Jewelry and instrument cases.....	9.5
Cutlery and tools, not elsewhere specified.....	21.8	Fancy articles, not elsewhere specified.....	29.2	Lead, bar, pipe, and sheet.....	(1)
Dyeing and finishing textiles.....	26.2	Firearms and ammunition.....	10.0	Leather, tanned, curried, and finished.....	12.2
Ink, writing.....	(1)	Furnishing goods, men's.....	13.7	Mats and matting.....	(1)
Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	35.7	Hammocks.....	(1)	Musical instruments, pianos and organs and materials.....	10.1
Lasts.....	45.9	Hats, straw.....	30.8	Oil, castor.....	(1)
Mucilage and paste.....	32.8	Horseshoes, not made in steel works or rolling mills.....	(1)	Rubber goods, not elsewhere specified.....	12.3
Ordnance and accessories.....	(1)	Optical goods.....	26.1	Sand and emery paper and cloth.....	(1)
Paper goods, not elsewhere specified.....	21.5	Paper and wood pulp.....	15.0	Screws, machine.....	18.9
Stationery goods, not elsewhere specified.....	27.2	Shoddy.....	23.7	Screws, wood.....	(1)
Waste.....	29.3	Soda-water apparatus.....	20.2	Silverware and plated ware.....	15.5
Whips.....	70.3	Sporting and athletic goods.....	22.7	Statuary and art goods.....	8.4
Woolen, worsted, and felt goods, and wool hats.....	32.6	Straw goods, not elsewhere specified.....	(1)		
		Toys and games.....	21.2		
		Wool pulling.....	(1)		
		Wool scouring.....	19.2		

OHIO.

Carriages and sleds, children's.....	22.5	Automobiles, including bodies and parts.....	15.6	Agricultural implements.....	9.9
Carriages and wagons and materials.....	13.7	Bicycles, motorcycles, and parts.....	21.6	Artificial stone.....	7.4
Cash registers and calculating machines.....	(1)	Brick and tile.....	10.1	Awnings, tents, and sails.....	9.6
Flags, banners, regalia, society badges, and emblems.....	37.3	Cars, street-railroad, not including operations of railroad companies.....	25.0	Bags, paper.....	15.2
Foundry supplies.....	31.6	Clothing, horse.....	(1)	Belting and hose, woven and rubber.....	13.9
Galvanizing.....	32.2	Clothing, men's, buttonholes.....	9.8	Billiard tables and materials.....	(1)
Grindstones.....	58.8	Coffins, burial cases, and undertakers' goods.....	12.5	Boxes, cigar.....	8.4
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	25.6	Flavoring extracts.....	11.4	Butter, reworking.....	16.5
Matches.....	(1)	Glass.....	15.6	Cars and general shop construction and repairs by steam-railroad companies.....	7.1
Pottery, terra-cotta, and fire-clay products.....	27.8	Ink, printing.....	21.5	Clothing, women's.....	5.1
Pumps, not including steam pumps.....	49.2	Iron and steel, blast furnaces.....	21.4	Copper, tin, and sheet-iron products.....	9.6
Roofing materials.....	20.3	Iron and steel, steel works and rolling mills.....	20.1	Food preparations.....	8.6
Rubber goods, not elsewhere specified.....	42.0	Iron and steel forgings.....	19.9	Foundry and machine-shop products.....	11.9
Safes and vaults.....	64.6	Lime.....	9.0	House-furnishing goods, not elsewhere specified.....	8.4
Scales and balances.....	(1)	Mattresses and spring beds.....	9.2	Iron and steel, doors and shutters.....	14.4
Stoves and furnaces, including gas and oil stoves.....	19.5	Pens, fountain, stylographic, and gold.....	9.9	Iron and steel pipe, wrought.....	11.1
Wood, turned and carved.....	11.1	Rules, ivory and wood.....	(1)	Lasts.....	(1)
		Screws, machine.....	19.8	Liquors, vinous.....	9.9
		Sewing machines, cases, and attachments.....	21.1	Locomotives, not made by railroad companies.....	(1)
		Signs and advertising novelties.....	19.2	Oil, linseed.....	9.9
		Whips.....	8.5	Oleomargarine.....	(1)
				Paper goods, not elsewhere specified.....	11.4
				Salt.....	16.0
				Shoddy.....	16.9
				Soap.....	15.3
				Stationery goods, not elsewhere specified.....	14.6
				Tin plate and terneplate.....	16.4
				Wall plaster.....	7.3
				Wheelbarrows.....	12.7
				Wirework, including wire rope and cable.....	8.6

1 Figures not be shown without disclosing individual operations.

MANUFACTURES.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
NEW JERSEY.					
Artists' materials.....	37.3	Bluing.....	(1)	Bone, carbon, and lamp black.....	(1)
Belting and hose, woven and rubber.....	39.6	Chemicals.....	19.4	Brushes.....	10.6
Drug grinding.....	45.4	China decorating.....	29.2	Buttons.....	12.1
Explosives.....	(1)	Crucibles.....	(1)	Card cutting and designing.....	9.2
Horseshoes, not made in steel works or rolling mills.....	(1)	Dyeing and finishing textiles.....	18.9	Cork, cutting.....	13.3
Kaolin and ground earths.....	16.8	Dyestuffs and extracts.....	19.6	Electrical machinery, apparatus, and supplies.....	12.8
Moving pictures.....	(1)	Files.....	(1)	Emery and other abrasive wheels.....	(1)
Musical instruments and materials, not specified.....	19.7	Fireworks.....	16.7	Engravers' materials.....	(1)
Oakum.....	(1)	Furs, dressed.....	26.2	Fancy articles, not elsewhere specified.....	8.1
Oil, castor.....	(1)	Jewelry and instrument cases.....	12.7	Fuel, manufactured.....	(1)
Oilcloth and linoleum.....	43.5	Lard, refined, not made in slaughtering and meat-packing establishments.....	(1)	Gas and electric fixtures and lamps and reflectors.....	12.8
Paving materials.....	(1)	Oil, essential.....	25.4	Glucose and starch.....	(1)
Pencils, lead.....	(1)	Oil, not elsewhere specified.....	(1)	Gold and silver, reducing and refining, not from the ore.....	18.8
Pens, steel.....	(1)	Paper patterns.....	20.9	Hat and cap materials.....	16.8
Petroleum, refining.....	(1)	Pipes, tobacco.....	17.3	Hones and whetstones.....	(1)
Phonographs and graphophones.....	(1)	Pottery, terra-cotta, and fire-clay products.....	15.2	Millinery and lace goods.....	8.0
Silk and silk goods, including throwsters.....	33.2	Rubber goods, not elsewhere specified.....	12.0	Needles, pins, and hooks and eyes.....	9.3
Smelting and refining, copper.....	33.2	Shipbuilding, including boat building.....	24.1	Signs and advertising novelties.....	15.4
Smelting and refining, not from the ore.....	34.2	Surgical appliances and artificial limbs.....		Type founding and printing materials.....	(1)
Sulphuric, nitric, and mixed acids.....	21.5			Wall paper.....	19.9
Wire.....	34.2			Wool scouring.....	(1)
MICHIGAN.					
Automobiles, including bodies and parts.....	33.8	Baskets, and rattan and willow ware.....	8.4	Beet sugar.....	21.8
Charcoal.....	29.6	Billiard tables and materials.....	(1)	Brass and bronze products.....	9.3
Oil, essential.....	23.0	Cash registers and calculating machines.....	(1)	Corsets.....	13.1
Salt.....	32.2	Food preparations.....	9.2	Flags, banners, regalia, society badges, and emblems.....	(1)
Show cases.....	26.0	Furniture and refrigerators.....	11.9	Fur goods.....	4.1
Wheelbarrows.....	(1)	Graphite and graphite refining.....	(1)	Springs, steel, car and carriage.....	14.5
		Grindstones.....	(1)	Stoves and furnaces, including gas and oil stoves.....	11.8
		Patent medicines and compounds and druggists' preparations.....	9.5	Window shades and fixtures.....	7.0
		Vinegar and cider.....	11.5	Wood distillation, not including turpentine and rosin.....	24.6
		Wall plaster.....	11.1		
		Wirework, including wire rope and cable.....	12.6		
WISCONSIN.					
Butter, cheese, and condensed milk.....	19.6	Gloves and mittens, leather.....	11.8	Hammocks.....	11.2
Clothing, horse.....	30.9	Leather, tanned, curried, and finished.....	13.6	Lime.....	7.1
Enameling and japanning.....	(1)	Malt.....	25.1	Liquors, malt.....	8.6
Straw goods, not elsewhere specified.....	(1)	Matches.....	(1)	Steam packing.....	(1)
		Mats and matting.....	(1)	Windmills.....	11.5
INDIANA.					
Sewing machines, cases, and attachments.....	(1)	Calcium lights.....	(1)	Carriages and sleds, children's.....	12.9
Wool pulling.....	(1)	Carriages and wagons and materials.....	13.5	Cars, steam-railroad, not including operations of railroad companies.....	7.7
		Cement.....	11.1	Glass.....	12.6
		Saws.....	(1)	Liquors, distilled.....	15.4
		Windmills.....	20.9	Musical instruments and materials, not specified.....	18.9
MISSOURI.					
Bags, other than paper.....	(1)	Awnings, tents, and sails.....	12.3	Calcium lights.....	(1)
		Axle grease.....	15.1	Cars, street-railroad, not including operations of railroad companies.....	(1)
		Boots and shoes, including cut stock and findings.....	9.5	Coffee and spice, roasting and grinding.....	10.9
		Fire extinguishers, chemical.....	(1)	Galvanizing.....	(1)
		Oil, castor.....	(1)	Leather goods.....	6.2
		Peanuts, grading, roasting, cleaning, and shelling.....	(1)	Pipes, tobacco.....	7.4
		Photographic apparatus and materials.....	6.3		
		Tin foil.....	(1)		

1 Figures can not be shown without disclosing individual operations.

SUMMARY, BY STATES AND DIVISIONS.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percent- age of total value of prod- ucts for United States.	Industry.	State's percent- age of total value of prod- ucts for United States.	Industry.	State's percent- age of total value of prod- ucts for United States.
CALIFORNIA.					
Canning and preserving.....	21.0	Beet sugar.....	(1) 3.2	Baking powders and yeast.....	(1)
Liquors, vinous.....	63.1	Lapidary work.....		Cars and general shop construction and repairs by street-railroad companies.....	9.4
Smelting and refining, lead.....	(1)			Cement.....	10.3
				Explosives.....	(1)
				Oakum.....	(1)
CONNECTICUT.					
Brass and bronze products.....	44.6	Boots and shoes, rubber.....	(1) 20.1	Crucibles.....	(1)
Clocks and watches, including cases and mate- rials.....	21.0	Cutlery and tools, not elsewhere specified.....	13.3	Dentists' materials.....	(1)
Corsets.....	38.5	Hat and cap materials.....	21.7	Oil, essential.....	(1)
Firearms and ammunition.....	58.5	Hats, fur-felt.....		Pens, fountain, stylographic, and gold.....	(1)
Gold and silver, reducing and refining, not from the ore.....	(1)	Iron and steel, nails and spikes, cut and wrought, including wire nails, not made in steel works or rolling mills.....	(1)	Pens, steel.....	(1)
Needles, pins, and hooks and eyes.....	63.3	Phonographs and graphophones.....	(1)	Rules, ivory and wood.....	(1)
Screws, machine.....	(1)	Screws, wood.....	(1)	Sewing machines, cases, and attachments.....	7.5
Silverware and plated ware.....	37.5	Typewriters and supplies.....	20.4		
MINNESOTA.					
Flax and hemp, dressed.....	(1) 15.7	Bags, other than paper.....	(1) 6.8	Furs, dressed.....	7.6
Flour-mill and gristmill products.....	(1)	Fur goods.....	30.0		
Mats and matting.....	(1)	Oil, linseed.....	(1)		
		Wheelbarrows.....	(1)		
KANSAS.					
Smelting and refining, zinc.....	31.7	Slaughtering and meat packing.....	12.1	Flour-mill and gristmill products.....	7.7
RHODE ISLAND.					
Jewelry.....	25.7	Gold and silver, reducing and refining, not from the ore.....	13.8	Boots and shoes, rubber.....	(1) 16.7
Screws, wood.....	(1)	Haircloth.....	(1) 16.0	Dyeing and finishing textiles.....	17.2
Washing machines and clothes wringers.....	(1)	Oleomargarine.....		Enameling and japanning.....	13.2
				Engraving and diesinking.....	(1)
				Files.....	13.2
				Gold and silver, leaf and foil.....	(1)
				Woolen, worsted, and felt goods, and wool hats.....	17.1
TEXAS.					
Oil, cottonseed, and cake.....	20.2	Ice, manufactured.....	8.9		
Wood preserving.....	27.4	Rice, cleaning and polishing.....	36.4		
		Sugar and molasses.....	2.8		
IOWA.					
Artificial stone.....	8.4	Butter, reworking.....	(1) 17.8	Butter, cheese, and condensed milk.....	9.4
		Buttons.....	12.7	Wood carpet.....	(1)
		Dairymen's, poulterers', and apiarists' sup- plies.....	(1) 19.2		
		Glucose and starch.....			
		Washing machines and clothes wringers.....			
LOUISIANA.					
Rice, cleaning and polishing.....	56.0			Bags, other than paper.....	9.8
Sugar and molasses.....	94.7			Candles.....	(1)
				Lumber and timber products.....	5.4
				Sugar, refining, not including beet sugar.....	14.0
WASHINGTON.					
Lumber and timber products.....	7.7			Wool pulling.....	(1)

1 Figures can not be shown without disclosing individual operations.

MANUFACTURES.

INDUSTRIES IN WHICH EACH SPECIFIED STATE RANKED FIRST, SECOND, OR THIRD, AS MEASURED BY VALUE OF PRODUCTS: 1909—Continued.

Table 10—Continued.

INDUSTRIES IN WHICH STATE RANKED—

FIRST.		SECOND.		THIRD.	
Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.	Industry.	State's percentage of total value of products for United States.
VIRGINIA.					
Peanuts, grading, roasting, cleaning, and shelling.....	81.5			Shipbuilding, including boat building.....	(¹)
GEORGIA.					
Fertilizers.....	16.2	Oil, cottonseed, and cake	16.0	Cordials and sirups.....	12.9
		Turpentine and rosin.....	27.4		
NEW HAMPSHIRE.					
Hones and whetstones.....	(¹)				
WEST VIRGINIA.					
Bone, carbon, and lamp black.....	54.5	Galvanizing.....	(¹)	Coke.....	7.9
		Iron and steel pipe, wrought.....	(¹)		
		Tin plate and terneplate.....	19.3		
COLORADO.					
Beet sugar.....	(¹)			Smelting and refining, lead.....	(¹)
FLORIDA.					
Turpentine and rosin.....	47.2				
DELAWARE.					
Pulp goods.....	58.3				

¹ Figures can not be shown without disclosing individual operations.

Table 11 shows for the different states the number of industries in which the state contributed one-half or more of the value of products for the country as a whole, and also the number in which it contributed one-third of the total but less than one-half. In a few instances the figures in the table do not represent the total number of industries for which the specified proportion of the total value of products was reported from the given state, owing to the fact that in some cases the percentage of the total value of products reported from the state in question can not be shown in Table 10, as it would indirectly result in disclosing the operations of individual concerns.

In 41 industries, representing nearly one-sixth of the total number (264), more than half of the total value of products was reported from a single state. In 62 other industries more than one-third of the total value of products was reported from a single state, 3 industries being counted twice in the table, as two states in each case reported more than one-third of the total value of products. There are thus 103 industries, representing nearly two-fifths of the total number distinguished by the Bureau of the Census, in which a

single state reported at least one-third of the total value of products.

A fuller discussion of the subject of concentration of industries is given in Chapter VII.

Table 11

STATE.	NUMBER OF INDUSTRIES IN WHICH THE STATE'S PROPORTION OF THE TOTAL VALUE OF PRODUCTS IN 1909 WAS—	
	50 per cent or over.	33.3 per cent but less than 50.
New York.....	21	29
Pennsylvania.....	6	9
Illinois.....	3	7
Massachusetts.....	1	4
Ohio.....	2	3
New Jersey.....		6
Michigan.....		1
California.....	1	
Connecticut.....	2	3
Texas.....		1
Louisiana.....	2	
Virginia.....	1	
West Virginia.....	1	
Florida.....		1
Delaware.....	1	
Kentucky.....		1

Summary, by geographic divisions.—In the census reports on population and agriculture much attention is given to the presentation and discussion of statistics for the nine main geographic divisions of the country. The states within a given geographic division are usually fairly similar to one another as to the composition and characteristics of the population and as to agricultural conditions. There is, however, much less similarity among the states of any given division with regard to manufacturing and mining, and the presentation of statistics by divisions, therefore, often fails to bring out the geographic distribution of these industries as a whole, or of individual industries, in a satisfactory manner. Nevertheless, considerable interest attaches to statistics of manufactures by geographic divisions, and information of material value may be derived from them. Such statistics are therefore given in the present report, but with less promi-

nence than in the reports dealing with population and agriculture.

General Table III presents the figures for the leading items covered by the manufactures censuses of 1909, 1904, and 1899 for all industries combined in each geographic division as well as in each state; and General Table IV gives detailed statistics for all industries combined, by divisions and states, for the census of 1909.

The following summary shows, for each geographic division, and also for the three great sections, the North, the South, and the West, the population in 1910, and the number of manufacturing establishments, average number of wage earners in such establishments, value of manufactured products, and value added to materials by manufacture in 1909. For comparison, some of the leading items from the agricultural census are also included.

Table 12

SECTION AND DIVISION.	POPULATION: 1910	MANUFACTURING INDUSTRIES: 1909				AGRICULTURE.		
		Number of establishments.	Wage earners (average number).	Value of products.	Value added by manufacture.	Acreage of land in farms: 1910	Value of all farm property: 1910	Value of all crops: 1909
United States.....	91,972,266	268,491	6,615,046	\$20,672,051,870	\$8,529,260,992	878,798,325	\$40,991,449,069	\$5,487,161,223
The North	55,757,115	193,850	5,197,138	16,827,427,130	6,915,305,425	413,483,256	27,481,267,056	3,129,454,109
New England.....	6,552,681	25,351	1,101,290	2,670,065,114	1,193,768,236	19,714,931	867,290,457	141,113,829
Middle Atlantic.....	19,315,892	81,315	2,207,747	7,141,761,302	2,982,263,573	43,191,056	2,959,599,622	416,243,625
East North Central.....	18,250,621	60,013	1,513,754	5,211,702,164	2,177,230,169	117,629,143	16,119,128,066	1,117,123,399
West North Central.....	11,637,921	27,171	374,337	1,803,898,550	562,043,447	232,648,121	13,535,369,511	1,443,959,494
The South	29,389,330	55,808	1,129,307	2,637,117,348	1,128,818,639	254,452,869	8,972,126,889	1,921,739,871
South Atlantic.....	12,194,895	28,088	663,015	1,381,186,210	591,181,845	109,782,255	2,961,290,773	742,105,246
East South Central.....	8,409,901	15,381	261,772	630,488,093	294,324,842	81,520,629	2,182,771,779	551,282,598
West South Central.....	8,784,534	12,339	204,520	625,443,045	243,311,949	169,149,976	3,835,154,337	628,343,999
The West	6,825,821	18,833	288,601	1,207,507,392	485,136,928	110,862,299	4,538,055,145	444,978,544
Mountain.....	2,633,517	5,254	75,435	363,995,598	135,803,366	59,533,420	1,737,573,368	193,997,759
Pacific.....	4,192,304	13,579	213,166	843,511,794	349,833,562	51,328,789	2,790,481,777	261,078,794

The significance of the statistics in the preceding table can be best brought out by means of Table 13, which shows for each item except number of establishments the percentage of the total for the United States

reported from each geographic division or section of the country, and which also gives the percentage of the total land area in each division and the rank of the nine divisions with respect to each item.

Table 13

SECTION AND DIVISION.	POPULATION: 1910		TOTAL LAND AREA.		MANUFACTURING INDUSTRIES: 1909				AGRICULTURE.							
	Rank.	Per cent of total.	Rank.	Per cent of total.	Wage earners (average number).		Value of products.		Value added by manufacture.		Acreage of land in farms: 1910		Value of all farm property: 1910		Value of all crops: 1909	
					Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.
United States.....	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0	.....	100.0
The North.....	.....	60.6	.....	31.0	.....	78.6	.....	81.4	.....	81.1	.....	47.1	.....	67.0	.....	59.9
New England.....	7	7.1	9	2.1	1	16.6	3	12.9	3	14.0	9	3.2	9	2.1	9	2.6
Middle Atlantic.....	1	21.0	8	3.4	1	33.4	1	34.5	1	35.0	8	4.9	4	7.2	6	7.6
East North Central.....	2	19.8	6	8.3	1	22.9	2	25.2	2	25.5	3	13.4	2	24.7	2	21.4
West North Central.....	4	12.7	2	17.2	5	5.7	4	8.7	5	6.6	1	26.5	1	33.0	1	26.4
The South.....	.....	32.0	.....	29.5	.....	17.1	.....	12.8	.....	13.2	.....	40.3	.....	21.9	.....	25.9
South Atlantic.....	3	13.3	5	9.0	4	19.0	5	6.7	4	6.2	4	11.8	5	7.2	3	13.5
East South Central.....	6	9.1	7	6.0	6	4.0	7	3.0	7	3.3	5	9.3	7	5.3	5	10.0
West South Central.....	5	9.6	3	14.5	8	3.1	8	3.0	8	2.3	2	19.2	3	9.4	4	11.2
The West.....	.....	7.4	.....	39.6	.....	4.4	.....	5.8	.....	5.7	.....	12.6	.....	11.1	.....	8.1
Mountain.....	9	2.9	1	28.9	9	1.1	9	1.8	9	1.6	6	6.8	8	4.3	8	3.3
Pacific.....	8	4.6	4	10.9	7	3.2	6	4.1	6	4.1	7	5.8	6	6.8	7	5.1

The North is by far the most important of the three great geographic sections of the country in manufacturing industries. With about three-fifths of the popu-

lation of the country in 1910, it contributed in 1909 more than four-fifths of the total value of manufactured products and employed nearly four-fifths of the

total number of wage earners in manufacturing industries. Most of the manufacturing industries of the North, however, are confined to three of the four geographic divisions in that section. The Middle Atlantic division is much more important in manufactures than any other in the country. With a little over one-fifth of the total population, it carried on in 1909 more than one-third of the manufacturing, as measured by all three of the items shown in the table. The East North Central division ranked next, with more than one-fourth of the total value of manufactured products and value added by manufacture. New England ranked third among the nine geographic divisions in manufacturing industries. The three divisions just named together reported nearly three-fourths of the United States total for each of the three items of manufactures statistics shown.

The South, with about one-third of the total population of the country in 1910, contained slightly more than one-sixth of the total number of wage earners in manufacturing industries in 1909, and contributed somewhat over one-eighth of the total value of products and value added by manufacture. The South Atlantic was the most important of the three southern divisions in manufacturing, and outranked the West North Central division with respect to average number of wage earners and value added by manufacture, though not with respect to total value of manufactured products. The West South Central division was, however, one of the least important of the nine divisions with respect to manufactures.

The West, like the South, ranks higher in agriculture than in manufactures. With 7.4 per cent of the total population of the country in 1910, it contributed less than 6 per cent of the value of manufactured products and value added by manufacture in 1909, and employed only 4.4 per cent of the total number of

wage earners in manufacturing industries. The Mountain division ranked lowest among the nine divisions in manufacturing, but the Pacific division ranked higher than the East South Central or the West South Central division, except that with respect to average number of wage earners it fell below the East South Central division.

Comparison between the ranking and percentages for manufactures and those for agriculture, as shown in the preceding table, indicates wide differences between these two great branches of industry with respect to geographic distribution. The Middle Atlantic states and New England, which are highly important in manufacturing industries, occupy but a low rank in agriculture. The East North Central division, however, ranked second among the nine divisions, both with respect to the three items relating to manufactures shown in the table and with respect to value of farm property and value of crops. The West North Central division is much the most important from the standpoint of agriculture but holds a comparatively low rank with respect to manufactures; and the West South Central division has also a much higher rank in agriculture than in manufactures. On the whole, agricultural industry is more evenly distributed over the country than manufacturing industry.

The following table shows the rank of the nine geographic divisions in manufactures at each of the last three censuses as measured by average number of wage earners, by value of products, and by value added to materials by manufacture, together with the percentages of the United States totals reported from each division. The figures are based on the absolute numbers appearing in General Table III, and the divisions are arranged according to the value of products reported at the census of 1909.

DIVISION.	WAGE EARNERS (AVERAGE NUMBER).						VALUE OF PRODUCTS.						VALUE ADDED BY MANUFACTURE.					
	1909		1904		1899		1909		1904		1899		1909		1904		1899	
	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.	Rank.	Per cent of total.
United States.....	1	100.0	1	100.0	1	100.0	1	100.0	1	100.0	1	100.0	1	100.0	1	100.0	1	100.0
Middle Atlantic.....	1	33.4	1	34.5	1	34.1	1	34.5	1	35.3	1	35.7	1	35.8	1	35.8	1	36.5
East North Central.....	2	22.9	2	22.4	2	22.8	2	25.2	2	24.4	2	25.0	2	25.5	2	24.8	2	25.0
New England.....	3	16.8	3	17.2	3	18.1	3	12.9	3	13.7	3	14.6	3	14.0	3	14.5	3	15.7
West North Central.....	5	8.7	5	5.7	5	5.6	4	8.7	4	8.7	4	8.5	5	6.6	5	6.7	4	6.7
South Atlantic.....	4	10.0	4	9.6	4	9.7	5	6.7	5	6.6	5	6.2	4	6.9	4	6.7	5	6.5
Pacific.....	7	3.2	7	3.0	7	2.6	6	4.1	6	3.7	6	3.2	6	4.1	6	3.8	7	2.9
East South Central.....	6	4.0	6	4.0	6	3.8	7	3.0	7	3.1	7	2.8	7	3.4	7	3.4	6	3.1
West South Central.....	8	3.1	8	2.6	8	2.4	8	3.0	8	2.8	8	2.2	8	2.9	8	2.7	8	2.0
Mountain.....	9	1.1	9	1.0	9	0.9	9	1.8	9	1.7	9	1.7	9	1.6	9	1.6	9	1.6

With respect to average number of wage earners, the nine geographic divisions had precisely the same rank at each of the three censuses, and the same is true with respect to total value of products, but with respect to value added by manufacture there was some change between 1899 and 1904. The West

North Central division ranked fourth in this respect in 1899 and fifth in 1904 and 1909, while the South Atlantic division, which occupied fifth place in 1899, had advanced to fourth place in 1904. Similarly, the East South Central and the Pacific divisions changed places between 1899 and 1904.

The percentages for the several divisions, however, show considerable change. The Middle Atlantic division, which is still the most important in manufacturing, and the New England division, which ranks third, both reported a smaller proportion of the average number of wage earners, value of products, and value added by manufacture in 1909 than in 1899, while each of the other seven geographic divisions reported a larger proportion in the later year than in the earlier in the case of each item, except that the West North Central division reported a slightly smaller proportion of the value added by manufacture in 1909 than in 1899, and that the Mountain division reported the same proportion of the total value added by manufacture in both years. The divisions which gained most conspicuously in their proportion of the total manufacturing business of the country were the Pacific and the West South Central.

The North reported 80.5 per cent of the total number of wage earners in manufacturing industries in 1899, as compared with 78.6 per cent 10 years later. The proportion for the South advanced from 15.9 per cent to 17.1 per cent during the same period and that for the West from 3.6 per cent to 4.4 per cent. Similar changes occurred with respect to value of products and value added by manufacture.

The changes which appear from census to census with respect to the percentages which the several sections and geographic divisions, respectively, reported of the totals for all manufacturing industries in the United States are much less conspicuous than the differences in the percentages of increase for the several sections and divisions. The following table shows the percentages of increase in the average number of wage earners, value of products, and value added by manufacture from 1899 to 1909, and also for each of the five-year periods making up the decade:

Table 15 PER CENT OF INCREASE.

SECTION AND DIVISION.	Wage earners (average number).									Value of products.			Value added by manufacture.		
	1899-1909			1904-1909			1899-1904			1899-1909			1904-1909		
	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1904	1899-1909	1904-1909	1899-1909	1904-1909	1899-1904	
United States.....	40.4	21.0	16.0	81.2	39.7	29.7	78.5	35.5	30.3						
The North.....	36.9	19.1	15.0	76.0	38.7	26.9	70.7	34.3	27.1						
New England.....	29.3	17.1	10.4	60.8	31.8	22.0	57.8	31.2	20.3						
Middle Atlantic.....	37.6	17.0	17.6	75.3	36.9	28.1	69.1	32.2	28.0						
East North Central.....	41.0	23.6	14.1	82.7	44.6	26.4	80.6	39.6	29.4						
West North Central.....	40.7	19.8	17.4	85.4	40.4	32.0	72.7	33.0	29.8						
The South.....	50.8	27.3	18.5	104.6	42.3	43.8	100.3	40.3	42.8						
South Atlantic.....	44.7	26.9	14.0	94.0	41.8	36.8	87.0	39.5	34.1						
East South Central.....	47.7	18.3	24.8	93.9	35.8	42.8	98.1	38.7	42.8						
West South Central.....	80.4	42.6	26.5	147.9	50.6	64.6	148.3	44.5	70.4						
The West.....	72.1	33.1	29.3	116.9	49.8	44.8	123.5	42.3	57.1						
Mountain.....	69.5	42.9	18.6	89.8	42.9	32.8	77.5	32.8	33.6						
Pacific.....	73.0	29.9	33.2	131.2	52.9	51.2	148.4	45.3	69.7						

The manufacturing industries of the South and the West have shown a more rapid growth than those of the North, the percentages of increase naturally being the greatest in those parts of the country where such industries are of comparatively recent development. In the North the average number of wage earners in

manufacturing industries increased 36.9 per cent between 1899 and 1909; in the South the increase was 50.8 per cent, and in the West 72.1 per cent. The value of manufactured products increased 76 per cent in the North, 104.6 per cent in the South, and 116.9 per cent in the West, and similar differences appear among these three sections with respect to the rate of increase in value added by manufacture. Among the nine geographic divisions those showing the lowest percentages of increase for the decade, with respect to all three items covered by the table, were the New England and Middle Atlantic divisions, while those showing the highest were the West South Central and Pacific divisions.

While two of the divisions forming the northeastern part of the country show the lowest percentages of increase between 1899 and 1909, they all show the greatest absolute increases. The following table shows the absolute increase in average number of wage earners, value of products, and value added by manufacture in each division:

Table 16 INCREASE: 1899-1909

SECTION AND DIVISION.	Wage earners (average number).	Value of products.	Value added by manufacture.
United States.....	1,902,282	\$9,295,125,169	\$3,028,125,792
The North.....	1,461,618	7,266,255,902	2,884,797,695
New England.....	249,387	1,009,717,014	437,457,115
Middle Atlantic.....	602,903	3,067,042,266	1,219,949,129
East North Central.....	440,442	2,358,648,637	871,731,322
West North Central.....	169,286	830,809,885	286,609,345
The South.....	380,267	1,547,916,892	585,321,688
South Atlantic.....	204,671	669,265,565	275,957,743
East South Central.....	84,564	305,401,558	145,745,119
West South Central.....	91,132	373,129,179	144,598,825
The West.....	120,898	659,872,375	238,067,159
Mountain.....	30,938	172,170,181	59,081,881
Pacific.....	89,960	478,702,214	208,984,028

As already indicated, the New England, Middle Atlantic, and East North Central divisions are decidedly the most important in manufacturing and are those in which manufacturing industries on an extensive scale have been longest established. It is worth while, therefore, to compare the progress of these three divisions as a whole during the decade 1899-1909 with that of the other six geographic divisions taken together. The following table gives figures for these two sections of the country:

Table 17

AREA.	Wage earners (average number).	Value of products.	Value added by manufacture.
New England, Middle Atlantic, and East North Central divisions:			
Total, 1909.....	4,822,801	\$15,022,528,560	\$6,332,261,978
Total, 1899.....	3,530,069	8,388,122,563	3,725,294,321
Increase.....	1,292,732	6,635,406,017	2,606,967,657
Per cent of increase.....	36.6	74.9	79.5
Remainder of country:			
Total, 1909.....	1,792,245	5,048,523,290	2,175,069,014
Total, 1899.....	1,182,094	2,818,894,128	1,103,970,889
Increase.....	609,551	2,229,719,162	1,070,098,125
Per cent of increase.....	51.5	100.4	96.7

The three northeasterly divisions taken together show an increase of 36.6 per cent in average number of

wage earners, 74.9 per cent in value of products, and 70.5 per cent in value added by manufacture, while the corresponding percentages for the remainder of the country are 51.5, 100.4, and 96.7, respectively. The absolute increase in each item for the three north-easterly divisions, however, was more than twice as great as the corresponding increases for the other six divisions taken together.

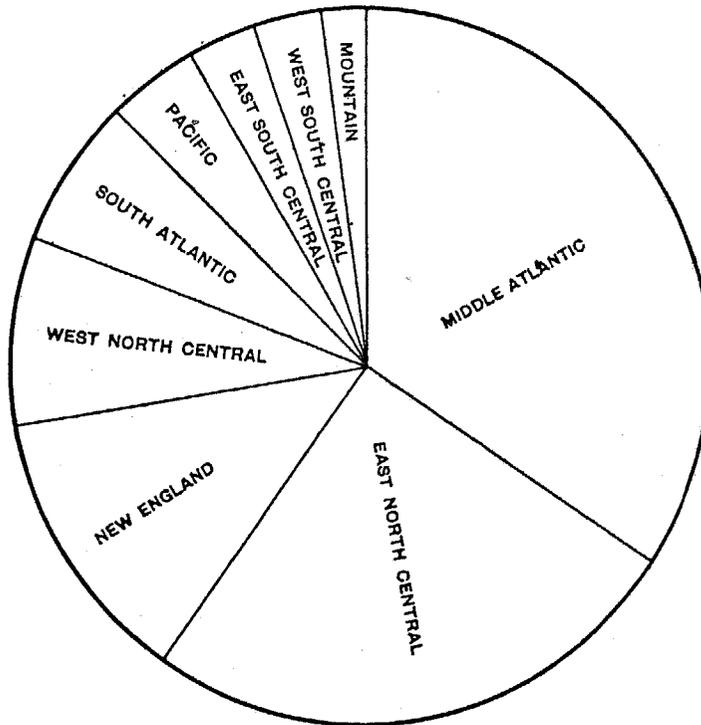
The general tables giving manufactures statistics, although they show the nine geographic divisions separately, do not give figures for the three great sections of the country—the North, the South, and the West. The most important items have already been presented for these three sections, but for convenience a more complete presentation for each of the last three censuses is given in the accompanying table.

SUMMARY OF MANUFACTURES STATISTICS FOR THE NORTH, THE SOUTH, AND THE WEST: 1909, 1904, AND 1899.

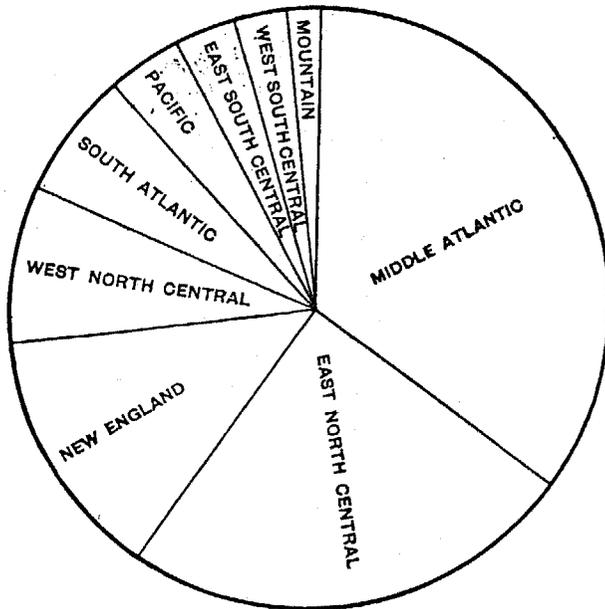
SECTION.	Number of establishments.	PERSONS ENGAGED IN MANUFACTURING INDUSTRIES.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture.
		Total.	Proprietors and firm members.	Salaries employees.	Wage earners (average number).							
United States:												
1909.....	268,491	7,678,578	273,265	790,287	6,615,046	18,675,376	\$18,428,269,706	\$938,574,967	\$3,427,037,884	\$12,142,780,878	\$20,672,051,870	\$8,529,260,992
1904.....	216,180	6,213,612	225,673	519,558	5,468,383	13,487,707	12,675,580,874	574,439,322	2,610,444,953	8,500,207,810	14,793,902,563	6,293,684,753
1899.....	207,514	.....	.....	364,120	4,712,763	10,097,893	8,975,256,496	380,771,321	2,008,361,119	6,575,851,491	11,406,926,701	4,831,075,210
THE NORTH—												
1909.....	193,850	6,040,103	193,641	649,324	5,197,138	13,730,683	14,728,325,195	777,561,484	2,772,142,882	9,912,121,705	16,827,427,130	6,915,305,425
1904.....	163,224	4,962,762	169,148	429,408	4,364,206	10,255,148	10,366,702,081	470,465,197	2,133,630,939	6,955,815,654	12,134,078,307	5,148,262,653
1899.....	159,663	.....	.....	306,684	3,796,120	7,938,376	7,591,818,144	325,966,935	1,687,287,126	5,510,532,808	9,561,091,228	4,050,508,420
THE SOUTH—												
1909.....	55,808	1,292,197	60,935	101,955	1,129,307	3,741,911	2,502,490,234	111,661,702	444,215,061	1,508,298,700	2,637,117,348	1,128,818,630
1904.....	38,154	995,521	41,493	66,718	887,310	2,530,685	1,664,686,019	66,898,796	326,530,311	1,049,090,467	1,853,595,708	804,505,241
1899.....	36,376	.....	.....	43,827	748,940	1,761,946	1,011,312,400	40,126,746	229,583,119	725,703,485	1,280,200,456	563,496,971
THE WEST—												
1909.....	18,833	346,278	18,689	38,988	288,601	1,202,732	1,197,454,277	49,351,781	210,679,941	722,370,464	1,207,507,392	485,136,923
1904.....	14,802	255,329	15,032	23,430	216,897	701,874	644,191,924	28,165,329	145,233,709	465,301,689	806,228,548	340,926,850
1899.....	11,475	.....	.....	13,609	167,703	397,571	372,125,952	14,677,550	91,490,374	339,565,198	556,635,017	217,069,819
Per cent of increase:												
United States—												
1899-1909.....	29.4	.....	.....	117.0	40.4	84.9	105.3	146.5	70.6	84.7	81.2	76.6
1904-1909.....	24.2	23.6	21.1	52.1	21.0	38.5	45.4	63.4	31.3	42.9	39.7	35.5
1899-1904.....	4.2	.....	.....	42.7	16.0	33.6	41.2	50.9	30.0	29.3	29.7	30.3
The North—												
1899-1909.....	21.4	.....	.....	111.7	36.9	73.0	94.0	138.5	64.3	79.9	76.0	70.7
1904-1909.....	18.8	21.7	14.5	51.2	19.1	33.9	42.1	62.2	29.6	41.9	38.7	34.3
1899-1904.....	2.2	.....	.....	40.0	15.0	29.2	36.6	47.1	26.8	26.8	26.9	27.1
The South—												
1899-1909.....	53.4	.....	.....	132.6	50.8	112.4	147.4	178.3	93.5	107.8	104.6	100.3
1904-1909.....	46.3	29.8	46.9	52.8	27.3	47.9	50.3	67.1	36.0	43.8	42.3	40.3
1899-1904.....	4.9	.....	.....	52.2	18.5	43.6	64.6	66.5	42.2	44.6	43.8	42.8
The West—												
1899-1909.....	64.1	.....	.....	186.5	72.1	202.5	221.8	226.2	130.3	112.7	116.9	123.5
1904-1909.....	27.2	35.6	24.3	66.4	33.1	71.4	85.9	75.2	45.1	55.2	49.8	42.3
1899-1904.....	29.0	.....	.....	72.2	29.3	76.5	73.1	91.9	53.7	37.0	44.8	57.1
Per cent of United States total:												
The North—												
1909.....	72.2	78.7	70.9	82.2	78.6	73.5	79.9	82.8	80.9	81.6	81.4	81.1
1904.....	75.5	79.9	75.0	82.6	79.8	76.0	81.8	83.5	81.9	82.2	82.0	81.8
1899.....	76.9	.....	.....	84.2	80.5	78.6	84.6	85.6	84.0	83.3	83.8	83.8
The South—												
1909.....	20.8	16.8	22.3	12.9	17.1	20.0	13.6	11.9	13.0	12.4	12.8	13.2
1904.....	17.6	16.0	18.4	12.8	16.2	18.8	13.1	11.6	12.5	12.3	12.5	12.8
1899.....	17.5	.....	.....	12.0	15.9	17.4	11.3	10.5	11.4	11.0	11.3	11.7
The West—												
1909.....	7.0	4.5	6.8	4.9	4.4	6.4	6.5	5.3	6.1	5.9	5.8	5.7
1904.....	6.3	4.1	6.7	4.5	4.0	5.2	5.1	4.9	5.6	5.5	5.4	5.4
1899.....	5.5	.....	.....	3.7	3.6	3.9	4.1	3.9	4.6	5.2	4.9	4.5

VALUE OF ALL MANUFACTURED PRODUCTS AND PROPORTIONAL VALUE FOR EACH DIVISION: 1909, 1904, AND 1899.

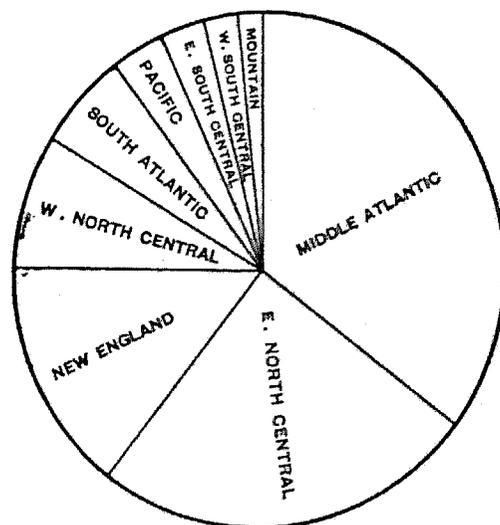
1909



1904



1899



CHAPTER V.

STATISTICS FOR INDIVIDUAL CITIES.¹

Introduction.—The practice of publishing census statistics of manufactures for individual cities was begun at the census of 1879. Prior to that the state and the county were the only political divisions for which separate manufactures statistics were given in the census reports. Beginning with the census of 1879 certain cities have been selected at each census for separate presentation. For 1879 the statistics for 100 cities were shown separately; for 1889 those for 165 cities; for 1899 those for 1,340 cities; for 1904 those for 544 cities; and for 1909, the year covered by the present census, those for 593 cities. The basis of selection has differed at each census. For 1879 279 cities were chosen for special canvass, although statistics were published only for the 100 largest cities; for 1889, statistics for 1,042 cities and towns were collected by special canvass but statistics were published separately only for places of 20,000 inhabitants or over. For 1899 the selection was based on quite a different principle; 1,340 places were selected, in advance of the enumeration, to be canvassed by special agents, because it was thought the work could be done to greater advantage by them than by the population enumerators, who collected the statistics of manufactures elsewhere at that census, and the statistics were published for all cities thus selected. Some of the places canvassed by this method had both a smaller population and less manufacturing business than some canvassed by the enumerators.

For the census of 1904 separate figures were published for all places of 8,000 inhabitants or over, and for that of 1909 for all places of 10,000 or more. It has not been considered desirable to incur the heavy expense of segregating the schedules for smaller places in making the tabulations and publishing the results. To do so would be the less justifiable because in many cases the data for these places, even those for all industries combined, could not be published without virtually disclosing the operations of individual establishments. Moreover, in the case of many small places a very large part of the manufacturing business which to all intents and purposes belongs to them is conducted in establishments located just outside the municipal boundaries. For such places data based only on establishments within the boundaries would be misleading, and, on the other hand, it would be impossible to determine precisely in a large number of cases what outside establish-

ments should properly be considered as pertaining to the given city or village. It often happens, even in the case of cities of more than 10,000 inhabitants, that manufacturing establishments which for all practical purposes form part of the industrial activities of the city are located outside its boundaries. Consequently, the statistics for individual cities in the present report should not be taken as showing precisely the true relative importance of each city as a manufacturing center in the broad sense. Many cities would rank very differently if the establishments in their suburbs were uniformly included. (For a further discussion of this subject, see Chapter VI.)

In selecting cities of 10,000 or more inhabitants for separate tabulation, the Census Bureau, of course, recognizes that some places of smaller population are more important from the manufacturing standpoint than some of those for which figures are shown separately, but convenience makes it desirable to adopt a definite population limit; otherwise much expense would be incurred merely in determining which places should and which should not be distinguished in the tabulation work.

At the census of 1904 statistics for individual industries were presented, so far as practicable, in the case of all cities of over 20,000 inhabitants and totals for all industries were published for each city with a population of 8,000 but less than 20,000. It was found, however, that in the case of a great many of the smaller cities it was impossible to give separate statistics for some of the most important industries, because to do so would result in the direct or indirect disclosure of the operations of individual concerns. It often happened, therefore, that the most important industry in a city would have to be grouped under the heading of "all other industries," and in a good many cases the industries for which statistics could be presented separately represented less than half of the total manufacturing interests of the city. For this reason it was not deemed worth while, in connection with the census of 1909, to present statistics for individual industries in cities of less than 50,000 inhabitants.

Description of detailed tables for individual cities.—A large part of the statistics regarding manufactures in individual cities are presented only in Volume IX of the Reports of the Thirteenth Census. In that volume the statistics for each state are presented in a separate section, and the details for the more important cities of the state are there shown. The prin-

¹The term "city," as used in this report, covers all incorporated places (including New England towns, except in Connecticut).

cial items covered by the manufactures census are shown for 1909, 1904, and 1899 for all industries combined in each city of 10,000 or more inhabitants and for the leading individual industries in each city of 50,000 inhabitants or over, and more detailed statistics for the census of 1909 are likewise shown.

Table 5 (pp. 92 to 115) shows, for each city having 10,000 inhabitants or over in 1910 or in 1900, for all industries combined, the principal items covered by the manufactures censuses of 1909, 1904, and 1899, respectively. The cities are arranged alphabetically under the name of the state in which they are located. For each state also the combined totals for all of the cities covered are presented. It should be noted, however, that the number of cities for which statistics for 1909 are presented is in many states greater than the number for which statistics for 1904 and 1899 are shown. This condition arises from the fact that the table gives no statistics for 1904 or 1899 for cities which had less than 10,000 inhabitants in 1900, and that some of the cities, which had more than 10,000 inhabitants in 1910 had less than that number in 1900. In a few instances the population of cities which had 10,000 inhabitants or over in 1900 had decreased to less than 10,000 in 1910. This fact resulted in a decrease in the total number of cities of 10,000 inhabitants or over in one state, Colorado, where 5 cities are shown for 1899 and 4 for 1909.

Summary for 75 leading cities: 1909.—Table 1, derived from the more detailed Table 5, presents for the 75 cities which ranked highest in value of manufactured products, statistics in regard to population in 1910 and number of manufacturing establishments, average number of wage earners, value of products, and value added by manufacture in 1909, together with the percentage of increase in the last three items for the decade 1899-1909 and the two five-year periods making up the decade, and the rank in each of these three items in 1909. The cities are arranged in order of rank as determined by value of products. As already indicated, the figures relate only to the manufacturing establishments actually situated within the boundaries of the respective cities. In the case of several of the cities establishments outside the boundary, which virtually constitute a part of the city's industrial interests, have a greater value of products than those within the city itself. The most notable instances of this character among the 75 cities are Pittsburgh and Boston, which would rank decidedly higher if the suburbs of each city were included with it than they do in the table, in which the statistics are confined to establishments within the city limits.

It should be noted, further, that there are a considerable number of cities not listed in the table which reported more wage earners or a greater value added by manufacture than some of the cities in the table, which were selected solely on the basis of rank in value of products. The ranking shown for the cities as to number of wage earners and value added by manufac-

ture relates only to the cities covered by the table, while in the case of value of products the ranking represents correctly the standing of the cities named among all the cities of the country. The rank with respect to population is not shown; many cities not included in the table rank higher in population than some of those which are included.

New York decidedly outranks any other city in manufacturing, although in proportion to its population its manufacturing interests are relatively less important than in a considerable number of other cities. Nearly one-tenth of the total value of manufactured products for the United States in 1909 was reported from New York City. As judged by value of products, Chicago ranked second among the manufacturing cities in 1909, followed by Philadelphia, St. Louis, Cleveland, Detroit, Pittsburgh, Boston, Buffalo, Milwaukee, and Newark, in the order named. Each of the 11 cities just named produced in 1909 manufactured products valued at more than \$200,000,000.

The rank of the cities of the country with respect to manufactures is in many cases decidedly different from their rank in population. Thus Boston ranks fifth among all the cities of the country in population, but eighth in value of manufactured products; Baltimore ranks seventh in population but thirteenth in value of manufactured products; and Los Angeles ranks seventeenth in population, but thirty-second in value of products. Kansas City, Kans., on the other hand, by reason of the large slaughtering establishments there, ranks fifteenth in value of manufactured products, but ranks sixty-fifth among the cities of the country in respect to population.

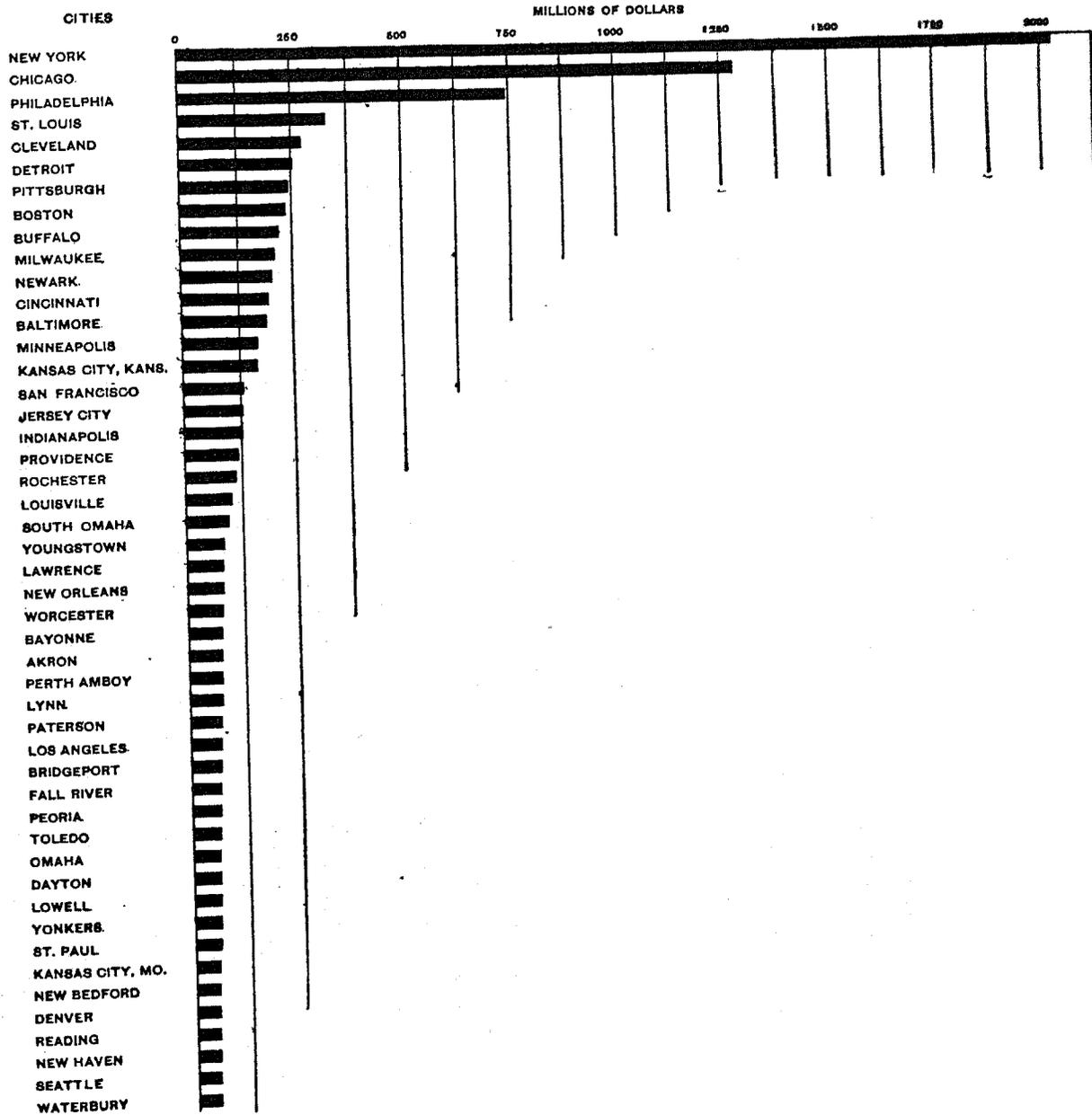
Of the 75 leading cities of the United States on the basis of population, there are 19 which are not included among the 75 cities shown in Table 1 as having the largest value of manufactures; these cities, in the order of their importance in population are Washington, D. C.; Oakland, Cal.; Birmingham, Ala.; Memphis, Tenn.; Scranton, Pa.; Nashville, Tenn.; Spokane, Wash.; Albany, N. Y.; San Antonio, Tex.; Salt Lake City, Utah; Dallas, Tex.; Des Moines, Iowa; Tacoma, Wash.; Houston, Tex.; Duluth, Minn.; St. Joseph, Mo.; Utica, N. Y.; Elizabeth, N. J.; and Fort Worth, Tex. Correspondingly, 19 cities which are not among the 75 leading cities of the country with respect to population are included in the table; arranged in the order of their rank in value of manufactured products, these cities are South Omaha, Neb.; Bayonne, N. J.; Akron, Ohio; Perth Amboy, N. J.; Peoria, Ill.; Waterbury, Conn.; Johnstown, Pa.; Manchester, N. H.; Brockton, Mass.; McKeesport, Pa.; Passaic, N. J.; Holyoke, Mass.; Lorain, Ohio; Joliet, Ill.; Schenectady, N. Y.; New Castle, Pa.; Pawtucket, R. I.; Sioux City, Iowa; and Haverhill, Mass.

The diagram following Table 1 shows graphically the value of products in 1909 for the 48 cities reporting products valued at more than \$50,000,000.

SUMMARY FOR 75 CITIES LEADING IN MANUFACTURING INDUSTRIES, AS MEASURED BY VALUE OF PRODUCTS.

CITY.	Popula- tion: 1910	Number of estab- lish- ments: 1909	WAGE EARNERS: 1909		VALUE OF PRODUCTS: 1909		VALUE ADDED BY MANUFACTURE: 1909			PER CENT OF INCREASE. ¹								
			Average number.	Rank.	Amount.	Rank.	Amount.	Rank.	Wage earners (average number).			Value of products.			Value added by manufacture.			
									1899- 1909	1904- 1909	1899- 1904	1899- 1909	1904- 1909	1899- 1904	1899- 1909	1904- 1909	1899- 1904	
New York, N. Y.	4,766,883	25,938	554,002	1	\$2,029,692,576	1	\$937,537,243	1	42.6	19.2	19.6	73.1	33.0	30.2	74.0	32.3	31.5	
Chicago, Ill.	2,185,283	9,656	293,977	2	1,281,171,181	2	487,701,458	2	32.9	21.5	9.4	60.6	34.1	19.7	65.0	33.6	23.5	
Philadelphia, Pa.	1,549,008	8,379	251,884	3	746,075,659	3	316,983,382	3	17.3	10.0	6.6	43.5	26.2	13.7	41.0	22.8	14.8	
St. Louis, Mo.	687,029	2,667	87,371	4	328,495,313	4	140,306,150	4	34.8	5.6	27.6	69.6	22.9	38.0	52.7	8.3	41.0	
Cleveland, Ohio.	560,663	2,148	84,728	5	271,960,833	5	117,045,810	5	53.1	32.3	15.7	95.2	58.2	23.4	86.1	57.4	18.2	
Detroit, Mich.	465,766	2,036	81,011	6	252,992,123	6	122,774,582	5	111.1	67.1	26.3	186.3	97.3	45.1	196.8	99.1	49.1	
Pittsburgh, Pa.	533,905	1,659	67,474	7	243,453,693	7	94,926,910	8	-6.0	-5.8	-0.2	11.6	15.2	-3.2	5.8	9.5	-3.4	
Boston, Mass.	670,585	3,155	69,637	8	237,457,472	8	112,880,317	7	31.8	17.7	11.9	45.9	28.8	13.3	40.3	25.8	11.5	
Buffalo, N. Y.	423,715	1,753	51,412	13	218,803,994	12	82,265,753	12	50.0	18.0	27.1	107.1	48.5	39.5	107.3	39.4	48.7	
Milwaukee, Wis.	373,857	1,764	59,602	12	208,323,630	10	87,702,207	11	44.4	37.2	5.2	87.9	51.0	24.5	71.4	31.1	30.8	
Newark, N. J.	347,469	1,858	59,955	11	202,511,520	11	87,832,112	10	39.8	18.3	18.2	79.6	35.0	33.1	69.0	26.6	33.5	
Cincinnati, Ohio.	363,591	2,184	60,192	10	194,515,092	12	92,583,742	9	9.6	2.7	6.6	37.3	17.1	17.2	31.7	11.8	17.8	
Baltimore, Md.	558,485	2,502	71,444	7	186,977,710	13	79,953,827	13	7.3	9.8	-2.3	38.4	24.5	11.1	33.5	14.9	16.2	
Minneapolis, Minn.	301,408	1,102	26,962	25	165,404,680	14	45,411,545	18	37.4	24.4	10.5	75.2	36.5	28.3	78.1	40.7	26.6	
Kansas City, Kans.	82,331	165	12,294	57	164,080,607	15	19,690,449	52	29.6	16.8	11.0	105.0	70.1	20.6	76.6	56.4	12.9	
San Francisco, Cal.	416,912	1,796	28,244	21	133,041,069	16	56,823,748	15	-13.2	-26.5	18.0	24.3	-3.4	28.7	37.0	-8.1	49.1	
Jersey City, N. J.	267,779	745	25,454	28	128,774,978	17	39,457,751	21	46.4	25.1	17.0	76.6	70.0	3.9	74.1	46.5	18.9	
Indianapolis, Ind.	233,650	855	31,815	19	126,522,113	18	42,371,177	20	51.6	19.0	27.4	113.3	53.9	38.6	101.4	39.1	44.8	
Providence, R. I.	224,326	1,080	40,381	14	120,450,381	19	55,470,359	16	20.9	16.5	3.7	52.9	30.7	16.9	53.6	32.0	16.3	
Rochester, N. Y.	218,149	1,203	39,108	15	112,676,215	20	62,001,833	14	39.4	23.1	13.3	88.8	38.9	35.9	97.3	43.6	37.4	
Louisville, Ky.	223,928	903	27,023	24	101,283,955	21	47,156,376	17	17.2	8.2	8.3	53.2	21.7	25.9	51.0	25.7	20.1	
South Omaha, Nebr.	26,259	71	6,306	70	92,435,712	22	14,762,682	68	-0.3	11.4	-10.5	33.0	37.1	-3.0	73.9	79.6	-3.2	
Youngstown, Ohio.	79,066	115	10,498	64	81,270,747	23	18,978,773	53	21.0	29.7	-6.7	139.7	73.5	38.2	76.1	62.6	8.3	
Lawrence, Mass.	85,892	162	30,542	20	79,270,363	24	34,554,606	23	46.1	39.4	4.8	91.6	66.5	15.1	104.5	85.6	10.2	
New Orleans, La.	339,075	848	17,186	41	78,794,030	25	30,061,971	28	6.2	-1.6	7.9	37.2	-3.2	41.7	76.2	33.1	32.4	
Worcester, Mass.	145,966	580	28,221	22	77,147,884	26	34,546,996	24	24.9	23.8	0.9	64.9	47.9	11.4	48.1	37.5	7.8	
Bayonne, N. J.	55,545	97	7,519	67	73,640,900	27	14,708,359	69	61.0	6.5	51.1	90.8	21.5	57.1	206.0	7.8	184.0	
Akron, Ohio.	69,067	246	15,831	45	73,158,206	28	30,087,578	27	91.7	64.5	16.6	232.3	118.0	52.4	223.7	128.8	41.4	
Perth Amboy, N. J.	32,121	80	5,866	72	73,092,703	29	9,160,649	72	192.6	48.5	97.0	419.8	110.0	147.5	237.5	104.3	65.2	
Lynn, Mass.	89,336	431	27,368	23	71,503,140	30	30,142,053	26	67.1	27.1	31.5	81.7	30.0	39.8	102.6	34.6	50.5	
Paterson, N. J.	125,600	702	32,004	18	69,584,351	31	34,856,753	22	12.1	12.3	-0.1	43.5	27.3	12.7	48.7	28.0	16.1	
Los Angeles, Cal.	319,198	1,325	17,327	40	63,586,274	32	29,673,666	29	235.0	66.2	101.5	353.2	97.0	130.0	321.1	84.0	128.9	
Bridgeport, Conn.	102,054	367	25,775	27	65,608,806	33	27,662,108	32	51.3	32.2	14.4	95.6	47.2	32.9	70.2	24.3	36.9	
Fall River, Mass.	119,295	288	37,139	16	64,145,726	34	28,621,794	31	21.2	38.4	-12.4	64.0	47.6	11.2	36.1	64.7	-17.4	
Peoria, Ill.	66,950	283	5,981	71	63,061,155	35	45,287,949	19	-0.3	2.5	-2.7	41.5	4.4	35.6	43.4	1.6	41.2	
Toledo, Ohio.	168,497	760	18,878	36	61,229,542	36	27,145,955	35	48.1	20.3	23.1	91.5	37.6	39.2	115.8	42.6	51.3	
Omaha, Nebr.	124,096	432	8,023	66	60,854,560	37	17,439,923	55	52.1	37.8	10.3	59.8	12.7	41.8	-3.9	57.0	-38.8	
Dayton, Ohio.	116,577	513	21,549	32	60,378,375	38	32,850,558	25	49.6	26.1	18.6	94.7	52.5	27.7	96.9	55.7	26.4	
Lowell, Mass.	106,294	320	32,575	17	80,270,961	39	27,440,216	34	11.4	11.2	0.2	46.3	28.6	13.8	31.1	37.4	-4.6	
Yonkers, N. Y.	79,803	158	12,711	55	59,333,865	40	16,131,946	63	68.2	30.0	29.4	242.9	76.9	93.9	107.8	57.9	31.7	
St. Paul, Minn.	214,744	719	19,339	35	58,990,025	41	28,690,391	30	48.5	34.6	10.3	96.3	53.9	27.5	102.8	52.4	33.1	
Kansas City, Mo.	248,381	902	14,643	53	60,540,510	42	23,742,651	39	51.0	32.6	13.8	131.9	53.8	50.8	114.7	47.9	45.1	
New Bedford, Mass.	96,652	207	26,566	26	53,237,839	43	24,674,271	37	74.1	48.8	17.0	127.5	80.7	26.0	112.5	84.4	15.2	
Denver, Colo.	213,381	766	12,058	59	51,538,547	44	20,611,242	51	41.9	24.7	13.8	36.0	40.6	-3.3	53.4	31.6	16.6	
Reading, Pa.	96,071	482	24,145	30	51,134,067	45	21,286,682	48	42.9	33.7	6.9	58.5	67.7	-6.7	35.7	54.5	-12.1	
New Haven, Conn.	133,605	590	23,547	31	51,071,397	46	26,752,139	36	33.8	9.8	21.8	46.3	28.8	13.7	42.6	26.5	12.7	
Seattle, Wash.	237,194	751	11,331	62	50,569,198	47	21,884,464	44	155.2	77.3	43.9	230.0	99.0	65.8	238.8	98.1	71.0	
Waterbury, Conn.	137,141	169	20,170	33	50,349,816	48	21,623,904	46	62.5	30.9	16.5	66.0	55.6	6.7	78.3	48.1	20.4	
Syracuse, N. Y.	173,249	738	18,148	38	49,434,615	49	27,659,019	33	53.7	24.7	23.2	86.2	42.5	30.7	97.6	48.7	32.9	
Camden, N. J.	94,538	365	16,527	42	49,137,874	50	21,754,074	45	113.5	30.5	63.5	173.4	46.3	86.9	189.0	65.3	74.9	
Columbus, Ohio.	181,511	586	16,428	44	49,031,872	51	23,828,062	38	19.2	14.5	4.1	41.1	24.0	13.8	44.4	17.5	23.0	
Trenton, N. J.	96,815	340	18,543	37	49,008,715	52	21,336,166	47	41.1	31.2	7.6	72.2	51.4	13.7	79.6	44.1	24.0	
Johnstown, Pa.	155,482	97	10,574	63	48,105,775	53	15,757,293	65	88.8	52.9	23.5	125.2	66.5	35.2	111.3	72.5	22.5	
Richmond, Va.	127,628	380	14,849	50	47,357,985	54	23,105,850	40	8.3	19.3	-9.3	92.0	70.7	12.5	75.3	65.3	6.1	
Portland, Oreg.	207,214	649	12,214	58	46,860,767	55	20,785,151	49	127.0	49.5	51.9	177.2	63.6	69.5	209.0	78.8	72.8	
Manchester, N. H.	70,063	175	24,735	29	46,811,919	56	16,314,820	60	38.5	40.7	-1.6	90.1	52.5	24.6	50.7	36.1	10.8	
Brockton, Mass.	56,873	196	14,737	51	45,972,388	57	17,406,991	57	43.1	6.1	34.9	85.0	21.6	52.0	82.8	14.2	60.0	
Cambridge, Mass.	104,839	275	15,260	47	44,227,395	58	20,661,738	50	37.8	4.6	31.8	52.0	4.3	45.8	67.7	19.5	40.4	
McKeesport, Pa.	42,694	68	8,246	65	42,494,567	59	15,198,832	66	14.3	-6.8	22.7	17.9	84.3	-36.1	6.9	41.5	-24.5	
Grand Rapids, Mich.	112,571	524																

VALUE OF MANUFACTURED PRODUCTS FOR 48 LEADING CITIES: 1909.



In the case of some of the cities listed in the table, the rank with respect to number of wage earners and value added by manufacture in 1909 was very different from that with respect to value of products, these differences being dependent upon the character of the predominating industries and upon the relative amount of duplication appearing in the statistics of value of products. It is noteworthy, however, that the 13 cities which ranked highest in value of products were also the 13 which occupied the highest rank with respect to wage earners and value added by manufacture, although considered individually only 4 of these cities held the same rank in each of the three respects. Conspicuous instances of cities having higher rank in value of products than in number of wage earners or value added by manufacture are Kansas City, Kans.; South Omaha, Nebr.; Youngstown, Ohio; and Bayonne and Perth Amboy, N. J. On the other hand, certain cities—particularly some in which textile industries predominate, such as Lawrence, Fall River, Lowell, and New Bedford, Mass., and Paterson, N. J.—have a decidedly higher rank with respect to number of wage earners than with respect to either value of products or value added by manufacture.

In considering the percentages of increase in value of products and value added by manufacture, as shown in the table, it should be borne in mind that in general there was an advance in the prices of commodities during the decade, and that this advance may have been relatively greater in the case of the products of the leading industries of some cities than in those of others.

For every city listed in the table a greater gross value of manufactured products was reported in 1909 than in 1899, and for every city except Omaha, a greater value added by manufacture. Only two cities—San Francisco, Cal., and New Orleans, La.—showed a loss in gross value of products in 1909 as compared with 1904; and four cities—San Francisco, Cal., Joliet, Ill., Schenectady, N. Y., and New Castle, Pa.—a loss in value added by manufacture. Between 1899 and 1904, however, decreases in value of products occurred in six cities. In number of wage earners Pittsburgh, Pa., San Francisco, Cal., South Omaha, Nebr., Peoria, Ill., and Troy, N. Y., showed a decline in 1909 as compared with 1899; several other cities show

decreases from 1899 to 1904, but these were more than made up during the second half of the decade. It may be noted that the statistics for the Pittsburgh metropolitan district, which is much more comprehensive than the city, show decided gains from census to census, and that a temporary decline in the manufacturing industries in San Francisco was the natural result of the earthquake and fire in 1906.

Of the cities reporting products valued at \$200,000,000 or more, Detroit shows the greatest percentages of increase between 1899 and 1909 in all of the items regarding manufactures shown in the table, and Buffalo the next greatest, except that the percentage of increase in the number of wage earners for Buffalo was exceeded by that for Cleveland. Among the smaller manufacturing cities included in the table, those showing the most conspicuous increases are Akron, Ohio; Perth Amboy, N. J.; Los Angeles, Cal.; Seattle, Wash.; Camden, N. J.; Portland, Oreg.; Passaic, N. J.; and Lorain, Ohio.

In the case of the majority of the cities, higher rates of increase in all three items are shown for the period 1904–1909 than for the period 1899–1904.

Comparison of selected cities with states.—The importance of the large cities in the manufacturing industries of the country is made more fully evident by a comparison of their statistics with those for the individual states as units. A comparison of this character is made in Table 2, which presents the cities in the order of their importance with respect to value of products in 1909, and also gives the number of states and territories (not counting the District of Columbia) which were outranked in value of products by each city.

Every state in the Union, except New York and Pennsylvania, was outranked in value of manufactured products in 1909 by the city of New York, and this was the case also in 1904 and 1899. Chicago and Philadelphia outranked in 1909, 43 and 42 states, respectively. Only New York, Pennsylvania, Illinois, Massachusetts, and Ohio outranked Chicago, while New Jersey, in addition to the states just mentioned, had a greater value of products than Philadelphia. Six states (besides the District of Columbia) reported a smaller value of products than Springfield, Mass., the lowest city in the table with respect to value of products in 1909.

Table 2

CITY.	Value of products: 1909	RANK OF CITY IN VALUE OF PRODUCTS.		Number of states and territories out-ranked in value of products: 1909	CITY.	Value of products: 1909	RANK OF CITY IN VALUE OF PRODUCTS.		Number of states and territories out-ranked in value of products: 1909
		1909	1899				1909	1899	
New York, N. Y.	\$2,029,692,576	1	1	46	Lowell, Mass.	\$60,270,961	39	28	9
Chicago, Ill.	1,281,171,181	2	2	43	Yonkers, N. Y.	59,353,865	40	72	9
Philadelphia, Pa.	746,075,659	3	3	42	St. Paul, Minn.	58,990,025	41	44	9
St. Louis, Mo.	328,495,313	4	5	35	Kansas City, Mo.	54,704,510	42	58	9
Cleveland, Ohio.	271,960,833	5	8	31	New Bedford, Mass.	53,237,829	43	60	8
Detroit, Mich.	252,992,123	6	15	30	Denver, Colo.	51,538,547	44	33	7
Pittsburgh, Pa.	243,453,693	7	4	30	Reading, Pa.	51,134,967	45	39	7
Boston, Mass.	237,457,472	8	6	30	New Haven, Conn.	51,071,397	46	25	7
St. Louis, N. Y.	218,803,994	9	13	29	Seattle, Wash.	50,569,198	47	73	7
Milwaukee, Wis.	208,323,630	10	11	25	Waterbury, Conn.	50,349,816	48	43	7
Newark, N. J.	202,511,520	11	10	24	Syracuse, N. Y.	49,434,615	49	48	6
Cincinnati, Ohio.	194,515,692	12	7	23	Camden, N. J.	49,137,874	50	70	6
Baltimore, Md.	186,977,710	13	9	23	Columbus, Ohio.	49,031,872	51	26	6
Minneapolis, Minn.	165,404,680	14	14	21	Trenton, N. J.	49,008,715	52	47	6
Kansas City, Kans.	164,080,607	15	16	20	Johnstown, Pa.	48,166,775	53	64	6
San Francisco, Cal.	133,041,069	16	12	18	Richmond, Va.	47,357,983	54	54	6
Jersey City, N. J.	128,774,978	17	18	17	Portland, Oreg.	46,890,767	55	74	6
Indianapolis, Ind.	126,522,113	18	22	17	Manchester, N. H.	46,811,919	56	55	6
Providence, R. I.	120,240,584	19	17	17	Brockton, Mass.	45,972,388	57	52	6
Rochester, N. Y.	112,676,215	20	21	16	Cambridge, Mass.	44,227,395	58	45	6
Louisville, Ky.	101,283,955	21	20	16	McKeesport, Pa.	42,494,567	59	34	6
South Omaha, Nebr.	92,435,712	22	19	15	Grand Rapids, Mich.	42,230,675	60	62	6
Youngstown, Ohio.	81,270,747	23	37	15	Passaic, N. J.	41,729,257	61	22	6
Lawrence, Mass.	79,992,668	24	27	14	Hartford, Conn.	40,679,598	62	57	6
New Orleans, La.	78,794,030	25	23	14	Holyoke, Mass.	40,097,224	63	56	6
Worcester, Mass.	77,147,884	26	25	14	Lorain, Ohio.	38,990,996	64	125	6
Bayonne, N. J.	73,640,900	27	31	13	Joliet, Ill.	38,516,523	65	59	6
Akron, Ohio.	73,158,206	28	63	12	Somerville, Mass.	38,696,577	66	63	6
Perth Amboy, N. J.	73,092,703	29	29	12	Schenectady, N. Y.	38,164,699	67	71	6
Lynn, Mass.	71,503,140	30	89	11	Wilmington, Del.	38,069,383	68	42	6
Paterson, N. J.	69,584,351	31	24	11	New Castle, Pa.	38,037,522	69	66	6
Los Angeles, Cal.	68,586,274	32	30	11	Troy, N. Y.	37,979,986	70	46	6
Bridgeport, Conn.	65,608,806	33	38	10	Pawtucket, R. I.	37,696,198	71	67	6
Fall River, Mass.	64,145,726	34	30	10	Sioux City, Iowa.	37,424,450	72	68	6
Peoria, Ill.	63,061,155	35	26	10	Haverhill, Mass.	35,276,617	73	59	6
Toledo, Ohio.	61,229,542	36	32	9	Atlanta, Ga.	33,038,002	74	86	6
Omaha, Nebr.	60,854,550	37	40	9	Springfield, Mass.	31,772,815	75	69	6
Dayton, Ohio.	60,378,376	38	41	9					

Leading industries in principal cities.—Table 3 shows for 1909 and 1904 the six leading industries in each of the 25 cities which led in value of manufactures in 1909.

Comparatively few changes took place between 1904 and 1909 in the industries which held first place in the several cities. In St. Louis the boot and shoe industry, which was third in 1904, took the lead in 1909, displacing the tobacco-products industry, which fell back to second place. In Detroit the remarkable growth of the automobile industry caused it to advance from fifth place in 1904 to first in 1909. Other cities in which the industry which led in 1904 had fallen to a lower position in 1909 are Milwaukee, Cincinnati, San Francisco, and Jersey City. In Newark, N. J., a single concern was engaged in smelting and refining copper and lead in both 1909 and 1904. In 1904, however, two reports were prepared for the different branches

of the business, while in 1909 but one report was prepared and the establishment was classified as a whole under "smelting and refining, copper." The smelting and refining of lead, therefore, does not appear as a separate industry for 1909. Of the 25 cities included in the table, Minneapolis is the only one in which all the six leading industries occupied the same relative positions at the two censuses, although in several other cities the changes were comparatively few. Slaughtering and meat packing was first in value of products in 1909 in 7 of the cities listed, a larger number than in the case of any other industry shown in the table. The foundry and machine-shop industry was among the six leading industries in 23 of the 25 cities in 1909, and in 22 in 1904; slaughtering and meat packing in 16 cities in 1909 and in 14 in 1904; and printing and publishing in 12 cities in 1909, and in 16 in 1904.

MANUFACTURES.

SIX LEADING INDUSTRIES AS MEASURED BY VALUE OF PRODUCTS

Table 3 CITY AND CENSUS YEAR.	INDUSTRY RANKING—		
	First.	Second.	Third.
NEW YORK, N. Y.:			
1909.....	Clothing, women's.	Clothing, men's, including shirts.	Printing and publishing.
1904.....	Clothing, women's.	Clothing, men's, including shirts.	Printing and publishing.
CHICAGO, ILL.:			
1909.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Clothing, men's, including shirts.
1904.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Clothing, men's, including shirts.
PHILADELPHIA, PA.:			
1909.....	Woolen, worsted, and felt goods, and wool hats.	Printing and publishing.	Sugar, refining, not including beet sugar.
1904.....	Woolen, worsted, and felt goods, and wool hats.	Sugar, refining, not including beet sugar.	Printing and publishing.
ST. LOUIS, MO.:			
1909.....	Boots and shoes, including cut stock and findings.	Tobacco manufactures.	Slaughtering and meat packing.
1904.....	Tobacco manufactures.	Liquors, malt.	Boots and shoes, including cut stock and findings.
CLEVELAND, OHIO:			
1909.....	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Automobiles, including bodies and parts.
1904.....	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Slaughtering and meat packing.
DETROIT, MICH.:			
1909.....	Automobiles, including bodies and parts.	Foundry and machine-shop products.	Slaughtering and meat packing.
1904.....	Foundry and machine-shop products.	Cars, steam-railroad, not including operations of railroad companies.	Patent medicines and compounds and druggists' preparations
PITTSBURGH, PA.:			
1909.....	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Iron and steel, blast furnaces.
1904.....	Iron and steel, steel works and rolling mills.	Foundry and machine-shop products.	Iron and steel, blast furnaces.
BOSTON, MASS.:			
1909.....	Printing and publishing.	Boots and shoes, including cut stock and findings.	Clothing, men's, including shirts.
1904.....	Printing and publishing.	Foundry and machine-shop products.	Sugar, refining, not including beet sugar.
BUFFALO, N. Y.:			
1909.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Flour-mill and gristmill products.
1904.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Flour-mill and gristmill products.
MILWAUKEE, WIS.:			
1909.....	Leather, tanned, curried, and finished.	Liquors, malt.	Foundry and machine-shop products.
1904.....	Liquors, malt.	Leather, tanned, curried, and finished.	Foundry and machine-shop products.
NEWARK, N. J.:			
1909.....	Smelting and refining, copper.	Leather, tanned, curried, and finished.	Foundry and machine-shop products.
1904.....	Smelting and refining, lead.	Leather, tanned, curried, and finished.	Liquors, malt.
CINCINNATI, OHIO:			
1909.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Clothing, men's, including shirts.
1904.....	Foundry and machine-shop products.	Clothing, men's, including shirts.	Slaughtering and meat packing.
BALTIMORE, MD.:			
1909.....	Clothing, men's, including shirts.	Copper, tin, and sheet-iron products.	Tobacco manufactures.
1904.....	Clothing, men's, including shirts.	Tobacco manufactures.	Foundry and machine-shop products.
MINNEAPOLIS, MINN.:			
1909.....	Flour-mill and gristmill products.	Lumber and timber products.	Oil, linseed.
1904.....	Flour-mill and gristmill products.	Lumber and timber products.	Oil, linseed.
KANSAS CITY, KANS.:			
1909.....	Slaughtering and meat packing.	Flour-mill and gristmill products.	Soap.
1904.....	Slaughtering and meat packing.	Soap.	Foundry and machine-shop products.
SAN FRANCISCO, CAL.:			
1909.....	Printing and publishing.	Sugar, refining, not including beet sugar.	Slaughtering and meat packing.
1904.....	Sugar, refining, not including beet sugar.	Printing and publishing.	Foundry and machine-shop products.
JERSEY CITY, N. J.:			
1909.....	Slaughtering and meat packing.	Sugar, refining, not including beet sugar.	Tobacco manufactures.
1904.....	Sugar, refining, not including beet sugar.	Slaughtering and meat packing.	Foundry and machine-shop products.
INDIANAPOLIS, IND.:			
1909.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Automobiles, including bodies and parts.
1904.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Flour-mill and gristmill products.
PROVIDENCE, R. I.:			
1909.....	Woolen, worsted, and felt goods, and wool hats.	Jewelry.	Foundry and machine-shop products.
1904.....	Woolen, worsted, and felt goods, and wool hats.	Jewelry.	Foundry and machine-shop products.
ROCHESTER, N. Y.:			
1909.....	Clothing, men's, including shirts.	Photographic apparatus and materials.	Boots and shoes, including cut stock and findings.
1904.....	Clothing, men's, including shirts.	Boots and shoes, including cut stock and findings.	Photographic apparatus and materials.
LOUISVILLE, KY.:			
1909.....	Tobacco manufactures.	Liquors, distilled.	Foundry and machine-shop products.
1904.....	Tobacco manufactures.	Oil, cottonseed, and cake.	Slaughtering and meat packing
SOUTH OMAHA, NEBR.:			
1909.....	Slaughtering and meat packing.	Soap.	Cooperage and wooden goods, not elsewhere specified.
1904.....	Slaughtering and meat packing.	Soap.	Cooperage and wooden goods, not elsewhere specified.
YOUNGSTOWN, OHIO:			
1909.....	Iron and steel, steel works and rolling mills.	Iron and steel, blast furnaces.	Foundry and machine-shop products.
1904.....	Iron and steel, steel works and rolling mills.	Iron and steel, blast furnaces.	Foundry and machine-shop products.
LAWRENCE, MASS.:			
1909.....	Woolen, worsted, and felt goods, and wool hats.	Cotton goods, including cotton small wares.	Dyeing and finishing textiles.
1904.....	Woolen, worsted, and felt goods, and wool hats.	Cotton goods, including cotton small wares.	Paper and wood pulp.
NEW ORLEANS, LA.:			
1909.....	Sugar, refining, not including beet sugar.	Liquors, distilled.	Bags, other than paper.
1904.....	Sugar, refining, not including beet sugar.	Rice, cleaning and polishing.	Bags, other than paper.

IN 25 CITIES LEADING IN MANUFACTURING INDUSTRIES:¹ 1909 AND 1904.

Table 3—Contd. CITY AND CENSUS YEAR	INDUSTRY RANKING—		
	Fourth.	Fifth.	Sixth.
NEW YORK, N. Y.: 1909.....	Slaughtering and meat packing.	Sugar, refining, not including beet sugar.	Foundry and machine-shop products.
1904.....	Sugar, refining, not including beet sugar.	Foundry and machine-shop products.	Slaughtering and meat packing.
CHICAGO, ILL.: 1909.....	Printing and publishing.	Iron and steel, steel works and rolling mills.	Lumber and timber products.
1904.....	Printing and publishing.	Iron and steel, steel works and rolling mills.	Cars, steam-railroad, not including operations of railroad companies.
PHILADELPHIA, PA.: 1909.....	Foundry and machine-shop products.	Clothing, women's.	Clothing, men's, including shirts.
1904.....	Foundry and machine-shop products.	Petroleum, refining.	Carpets and rugs, other than rag.
ST. LOUIS, MO.: 1909.....	Liquors, malt.	Printing and publishing.	Foundry and machine shop products.
1904.....	Slaughtering and meat packing.	Printing and publishing.	Foundry and machine-shop products.
CLEVELAND, OHIO: 1909.....	Slaughtering and meat packing.	Clothing, women's.	Iron and steel, blast furnaces.
1904.....	Clothing, women's.	Printing and publishing.	Iron and steel, blast furnaces.
DETROIT, MICH.: 1909.....	Tobacco manufactures.	Brass and bronze products.	Patent medicines and compounds and druggists' preparations.
1904.....	Tobacco manufactures.	Automobiles, including bodies and parts.	Brass and bronze products.
PITTSBURGH, PA.: 1909.....	Slaughtering and meat packing.	Printing and publishing.	Cars and general shop construction and repairs by steam-railroad companies.
1904.....	Slaughtering and meat packing.	Printing and publishing.	Bread and other bakery products.
BOSTON, MASS.: 1909.....	Foundry and machine-shop products.	Sugar, refining, not including beet sugar.	Confectionery.
1904.....	Clothing, men's, including shirts.	Boots and shoes, including cut stock and findings.	Liquors, malt.
BUFFALO, N. Y.: 1909.....	Oil, linseed.	Automobiles, including bodies and parts.	Soap.
1904.....	Oil, linseed.	Printing and publishing.	Smelting and refining, copper.
MILWAUKEE, WIS.: 1909.....	Slaughtering and meat packing.	Cars and general shop construction and repairs by steam-railroad companies.	Iron and steel, steel works and rolling mills.
1904.....	Iron and steel, steel works and rolling mills.	Slaughtering and meat packing.	Flour-mill and gristmill products.
NEWARK, N. J.: 1909.....	Jewelry.	Liquors, malt.	Paint and varnish.
1904.....	Foundry and machine-shop products.	Jewelry.	Smelting and refining, copper.
CINCINNATI, OHIO: 1909.....	Boots and shoes, including cut stock and findings.	Printing and publishing.	Liquors, malt.
1904.....	Boots and shoes, including cut stock and findings.	Printing and publishing.	Liquors, distilled.
BALTIMORE, MD.: 1909.....	Slaughtering and meat packing.	Foundry and machine-shop products.	Printing and publishing ¹
1904.....	Copper, tin, and sheet-iron products.	Canning and preserving.	Printing and publishing.
MINNEAPOLIS, MINN.: 1909.....	Foundry and machine-shop products.	Printing and publishing.	Bags, other than paper.
1904.....	Foundry and machine-shop products.	Printing and publishing.	Bags, other than paper.
KANSAS CITY, KANS.: 1909.....	Foundry and machine-shop products.	Lumber and timber products.	Cars and general shop construction and repairs by steam-railroad companies.
1904.....	Flour-mill and gristmill products.	Oleomargarine.	Cooperage and wooden goods, not elsewhere specified.
SAN FRANCISCO, CAL.: 1909.....	Foundry and machine-shop products.	Bread and other bakery products.	Coffee and spice, roasting and grinding.
1904.....	Slaughtering and meat packing.	Shipbuilding, including boat building.	Bread and other bakery products.
JERSEY CITY, N. J.: 1909.....	Soap.	Petroleum, refining.	Foundry and machine-shop products.
1904.....	Soap.	Cars and general shop construction and repairs by steam-railroad companies.	Tobacco manufactures.
INDIANAPOLIS, IND.: 1909.....	Flour-mill and gristmill products.	Printing and publishing.	Canning and preserving.
1904.....	Printing and publishing.	Lumber and timber products.	Carriages and wagons and materials.
PROVIDENCE, R. I.: 1909.....	Silverware and plated ware.	Gold and silver, reducing and refining, not from the ore.	Rubber goods, not elsewhere specified.
1904.....	Silverware and plated ware.	Gold and silver, reducing and refining, not from the ore.	Cotton goods, including cotton small wares.
ROCHESTER, N. Y.: 1909.....	Foundry and machine-shop products.	Printing and publishing.	Flour-mill and gristmill products.
1904.....	Petroleum, refining.	Printing and publishing.	Foundry and machine-shop products.
LOUISVILLE, KY.: 1909.....	Flour-mill and gristmill products.	Slaughtering and meat packing.	Clothing, men's, including shirts.
1904.....	Clothing, men's, including shirts.	Flour-mill and gristmill products.	Liquors, distilled.
SOUTH OMAHA, NEBR.: 1909.....	Food preparations.	Liquors, malt.	Patent medicines and compounds and druggists' preparations.
1904.....	Firearms and ammunition.	Liquors, malt.	Printing and publishing.
YOUNGSTOWN, OHIO: 1909.....	Lumber and timber products.	Electrical machinery, apparatus, and supplies.	Liquors, malt.
1904.....	Iron and steel pipe, wrought.	Lumber and timber products.	Printing and publishing.
LAWRENCE, MASS.: 1909.....	Paper and wood pulp.	Foundry and machine-shop products.	Lumber and timber products.
1904.....	Foundry and machine-shop products.	Dyeing and finishing textiles.	Boots and shoes, including cut stock and findings.
NEW ORLEANS, LA.: 1909.....	Rice, cleaning and polishing.	Lumber and timber products.	Tobacco manufactures.
1904.....	Lumber and timber products.	Tobacco manufactures.	Printing and publishing.

¹ As measured by value of products in 1909.

Leading cities in 15 leading industries.—Table 4 shows, for each of the 15 leading industries of the United States as determined by value of products in 1909, the 6 cities which reported the largest value of products in 1909 and in 1904, together with the percentage of the total value of products for the industry which was reported from the given city.

The prominence of any particular city with reference to a given industry may be due to the fact that the industry is largely concentrated in a few cities or in a limited section of the country, or it may be due merely to the fact that the city is one of very large population. For example, Kansas City, Kans., although a comparatively small city, ranked second in 1909 among the cities of the country with reference to the slaughtering and meat-packing industry, that industry being in considerable measure concentrated in a few localities. The prominence of Chicago in the same industry may be attributed partly to the size of the city and partly to a concentration of the industry there on account of transportation facilities. Again, the prominence of Fall River, New Bedford, and Lowell in the manufacture of cotton goods is an illustration of the local

concentration of industry. In the case of such localized industries the products are usually marketed widely. On the other hand, in such industries as printing and publishing and the bakery industry, the output is mainly utilized in the community where produced, and the magnitude of such an industry in any given city is largely dependent upon the population of that city. New York, Chicago, and Philadelphia, the three largest cities from the standpoint of population, also ranked first, second, and third, respectively, in the printing and publishing and the bakery industries.

In 1909 New York and Chicago each ranked first among the cities of the country in 5 of the 15 leading industries, and Pittsburgh, Minneapolis, Fall River, Lynn, and Lawrence, each in 1 industry.

In 12 of the 15 industries shown in the table the same cities held first place in 1909 as in 1904, and in 4 industries—printing and publishing, the manufacture of cotton goods, and the making of men's clothing and of women's clothing—the same 6 cities held the leading places at both of these censuses, their rank in each case being the same in both years.

INDIVIDUAL CITIES.

SIX LEADING CITIES, AS MEASURED BY VALUE OF PRODUCTS IN 15 LEADING INDUSTRIES,¹ WITH PERCENTAGE WHICH EACH REPORTED OF THE TOTAL VALUE OF PRODUCTS FOR THE INDUSTRY: 1909 AND 1904.

INDUSTRY.	Census.	CITY BANKING—					
		First.	Per cent of United States total.	Second.	Per cent of United States total.	Thrd.	Per cent of United States total.
		Slaughtering and meat packing.....	1909 1904	Chicago, Ill.....	23.7	Kansas City, Kans.....	10.8	New York, N. Y.....	7.0
		Chicago, Ill.....	29.3	Kansas City, Kans.....	9.8	South Omaha, Nebr.....	(²)
Foundry and machine-shop products..	1909 1904	Chicago, Ill.....	7.3	New York, N. Y.....	5.2	Philadelphia, Pa.....	3.1
		Chicago, Ill.....	7.8	New York, N. Y.....	6.6	Philadelphia, Pa.....	3.7
Lumber and timber products.....	1909 1904	Chicago, Ill.....	2.8	New York, N. Y.....	2.1	Minneapolis, Minn.....	1.0
		New York, N. Y.....	2.4	Chicago, Ill.....	2.2	Minneapolis, Minn.....	1.2
Iron and steel, steel works and rolling mills.	1909 1904	Pittsburgh, Pa.....	8.3	Youngstown, Ohio.....	5.1	Chicago, Ill.....	4.7
		Pittsburgh, Pa.....	11.5	Cleveland, Ohio.....	4.8	Youngstown, Ohio.....	4.4
Flour-mill and gristmill products.....	1909 1904	Minneapolis, Minn.....	8.9	Buffalo, N. Y.....	2.3	Milwaukee, Wis.....	0.9
		Minneapolis, Minn.....	8.8	New York, N. Y.....	(²)	Buffalo, N. Y.....	1.4
Printing and publishing.....	1909 1904	New York, N. Y.....	24.9	Chicago, Ill.....	10.1	Philadelphia, Pa.....	6.2
		New York, N. Y.....	25.1	Chicago, Ill.....	9.6	Philadelphia, Pa.....	6.4
Cotton goods, including cotton small wares.	1909 1904	Fall River, Mass.....	7.7	New Bedford, Mass.....	6.8	Lowell, Mass.....	3.9
		Fall River, Mass.....	7.2	New Bedford, Mass.....	5.0	Lowell, Mass.....	4.3
Clothing, men's, including shirts.....	1909 1904	New York, N. Y.....	38.4	Chicago, Ill.....	15.0	Baltimore, Md.....	6.4
		New York, N. Y.....	36.7	Chicago, Ill.....	13.4	Baltimore, Md.....	6.2
Boots and shoes, including cut stock and findings.	1909 1904	Lynn, Mass.....	9.1	Brockton, Mass.....	7.7	St. Louis, Mo.....	6.6
		Lynn, Mass.....	9.9	Brockton, Mass.....	9.5	Haverhill, Mass.....	5.7
Woolen, worsted, and felt goods, and wool hats.	1909 1904	Lawrence, Mass.....	13.4	Philadelphia, Pa.....	12.6	Providence, R. I.....	6.9
		Philadelphia, Pa.....	12.3	Lawrence, Mass.....	9.7	Providence, R. I.....	7.2
Tobacco manufactures.....	1909 1904	New York, N. Y.....	15.0	St. Louis, Mo.....	(²)	Richmond, Va.....	(²)
		New York, N. Y.....	15.3	St. Louis, Mo.....	(²)	Louisville, Ky.....	3.9
Cars and general shop construction and repairs by steam-railroad companies.	1909 1904	Chicago, Ill.....	3.8	Altoona, Pa.....	(²)	Pittsburgh, Pa.....	2.1
		Altoona, Pa.....	(²)	Chicago, Ill.....	3.6	Pittsburgh, Pa.....	2.0
Bread and other bakery products.....	1909 1904	New York, N. Y.....	15.6	Chicago, Ill.....	6.8	Philadelphia, Pa.....	4.8
		New York, N. Y.....	16.3	Chicago, Ill.....	7.7	Philadelphia, Pa.....	5.4
Iron and steel, blast furnaces.....	1909 1904	Chicago, Ill.....	(²)	Youngstown, Ohio.....	(²)	Pittsburgh, Pa.....	5.3
		Chicago, Ill.....	(²)	Pittsburgh, Pa.....	6.7	Youngstown, Ohio.....	(²)
Clothing, women's.....	1909 1904	New York, N. Y.....	69.3	Philadelphia, Pa.....	7.8	Chicago, Ill.....	4.1
		New York, N. Y.....	68.0	Philadelphia, Pa.....	5.2	Chicago, Ill.....	4.7

INDUSTRY.	Census.	CITY BANKING—					
		Fourth.	Per cent of United States total.	Fifth.	Per cent of United States total.	Sixth.	Per cent of United States total.
		Slaughtering and meat packing.....	1909 1904	South Omaha, Nebr.....	(²)	Indianapolis, Ind.....	2.9	St. Louis, Mo.....	1.9
		New York, N. Y.....	6.1	Indianapolis, Ind.....	2.7	St. Louis, Mo.....	1.9
Foundry and machine-shop products..	1909 1904	Cleveland, Ohio.....	3.0	Pittsburgh, Pa.....	1.8	Buffalo, N. Y.....	1.7
		Cleveland, Ohio.....	2.7	Pittsburgh, Pa.....	2.4	Cincinnati, Ohio.....	1.8
Lumber and timber products.....	1909 1904	Portland, Oreg.....	0.9	Seattle, Wash.....	0.7	Philadelphia, Pa.....	0.7
		Portland, Oreg.....	0.6	Philadelphia, Pa.....	0.6	Cincinnati, Ohio.....	0.6
Iron and steel, steel works and rolling mills.	1909 1904	Cleveland, Ohio.....	3.9	McKeesport, Pa.....	(²)	Johnstown, Pa.....	(²)
		Chicago, Ill.....	3.7	Duquesne, Pa.....	(²)	McKeesport, Pa.....	(²)
Flour-mill and gristmill products.....	1909 1904	Chicago, Ill.....	(²)	Louisville, Ky.....	0.7	Indianapolis, Ind.....	0.7
		Milwaukee, Wis.....	0.9	Kansas City, Mo.....	0.8	Seattle, Wash.....	0.6
Printing and publishing.....	1909 1904	Boston, Mass.....	3.3	St. Louis, Mo.....	2.3	San Francisco, Cal.....	1.7
		Boston, Mass.....	4.1	St. Louis, Mo.....	3.0	San Francisco, Cal.....	2.0
Cotton goods, including cotton small wares.	1909 1904	Philadelphia, Pa.....	3.6	Manchester, N. H.....	(²)	Pawtucket, R. I.....	2.3
		Philadelphia, Pa.....	3.9	Manchester, N. H.....	(²)	Pawtucket, R. I.....	2.2
Clothing, men's, including shirts.....	1909 1904	Philadelphia, Pa.....	5.1	Rochester, N. Y.....	3.3	Cincinnati, Ohio.....	3.0
		Philadelphia, Pa.....	5.8	Rochester, N. Y.....	3.7	Cincinnati, Ohio.....	3.6
Boots and shoes, including cut stock and findings.	1909 1904	Haverhill, Mass.....	5.7	Boston, Mass.....	5.1	New York, N. Y.....	3.6
		St. Louis, Mo.....	5.5	New York, N. Y.....	3.8	Boston, Mass.....	3.2
Woolen, worsted, and felt goods, and wool hats.	1909 1904	Passaic, N. J.....	3.8	Woonsocket, R. I.....	(²)	Holyoke, Mass.....	(²)
		Passaic, N. J.....	0.3	Woonsocket, R. I.....	(²)	Holyoke, Mass.....	(²)
Tobacco manufactures.....	1909 1904	Durham, N. C.....	(²)	Chicago, Ill.....	4.0	Louisville, Ky.....	3.9
		Chicago, Ill.....	3.3	Baltimore, Md.....	(²)	Winston, N. C.....	(²)
Cars and general shop construction and repairs by steam-railroad companies.	1909 1904	Baltimore, Md.....	1.8	Reading, Pa.....	1.4	Philadelphia, Pa.....	1.3
		Philadelphia, Pa.....	1.5	Baltimore, Md.....	1.4	Reading, Pa.....	1.4
Bread and other bakery products.....	1909 1904	St. Louis, Mo.....	2.2	Boston, Mass.....	2.0	Pittsburgh, Pa.....	2.0
		Pittsburgh, Pa.....	2.3	St. Louis, Mo.....	2.3	Boston, Mass.....	1.9
Iron and steel, blast furnaces.....	1909 1904	Cleveland, Ohio.....	(²)	Lackawanna, N. Y.....	(²)	Duquesne, Pa.....	(²)
		Duquesne, Pa.....	(²)	Johnstown, Pa.....	(²)	Cleveland, Ohio.....	(²)
Clothing, women's.....	1909 1904	Cleveland, Ohio.....	3.3	Boston, Mass.....	2.0	St. Louis, Mo.....	1.3
		Cleveland, Ohio.....	3.0	Boston, Mass.....	2.3	St. Louis, Mo.....	1.2

¹ As measured by value of products in 1909.

² Figures can not be shown without disclosing individual operations.

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899.

Note.—The figures for some cities do not agree with those published in 1904, because it was necessary to revise the totals in order to include data only for those establishments located within the corporate limits of the city. Statistics of power are not available for the censuses of 1904 and 1899.

[A minus sign (—) denotes decrease.]

STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).	Value of products.
Expressed in thousands.															
United States:															
593 cities.....	1909	135,772	5,041,165	129,058	595,465	4,316,642	8,935,337	\$12,054,112	\$714,394	\$2,335,505	\$8,261,873	\$14,264,879	\$6,003,006		
436 cities.....	1904	108,984	3,951,141	109,791	377,786	3,463,564		8,187,242	424,787	1,719,154	5,569,549	9,845,782	4,277,233		
436 cities.....	1899	102,918			273,566	3,044,439		6,163,082	294,430	1,370,624	4,487,086	7,864,564	3,377,478		
Alabama:															
7 cities.....	1909	579	22,271	397	2,647	19,227	96,151	49,068	2,855	9,159	29,534	49,346	19,812		
3 cities.....	1904	320	9,649	279	947	8,423		12,775	967	3,548	8,460	16,413	7,953		
3 cities.....	1899	274			565	7,389		8,840	576	2,807	7,237	15,029	7,792		
Anniston.....	1909	39	2,352	23	162	2,167	9,310	4,345	210	870	2,824	4,333	1,509		
Bessemer.....	1909	31	2,111	23	272	1,816	15,120	7,812	310	991	4,239	6,106	1,867		
Birmingham.....	1909	248	10,412	152	1,261	8,999	55,311	23,718	1,435	4,392	14,010	24,128	10,118	125.7	
	1904	122	4,551	97	467	3,987		5,739	455	1,709	3,949	7,593	3,644	14.2	
	1899	109			284	3,490		4,314	321	1,359	3,980	8,599	4,619	217.8	
Gadsden.....	1909	27	871	16	69	786	1,524	987	66	355	904	1,525	621		
Mobile.....	1909	126	2,828	109	357	2,362	5,845	5,250	366	1,199	2,939	5,429	2,490	-5.4	
	1904	139	2,862	128	238	2,496		3,524	263	1,199	2,322	4,942	2,620	5.3	
	1899	113			161	2,371		2,506	146	948	1,542	3,486	1,944	41.8	
Montgomery.....	1909	73	2,723	46	393	2,284	6,355	5,234	353	1,003	3,023	5,443	2,420	17.7	
	1904	59	2,236	54	242	1,940		3,212	247	640	2,189	3,878	1,689	27.0	
	1899	52			120	1,528		2,020	109	500	1,715	2,944	1,229	40.4	
Selma.....	1909	35	974	28	133	813	2,686	1,722	115	349	1,595	2,382	787	31.7	
Arizona:															
2 cities.....	1909	92	1,057	86	112	859	2,072	2,166	126	754	2,134	3,504	1,370		
Phoenix.....	1909	57	432	58	70	304	669	1,258	69	242	864	1,467	603		
Tucson.....	1909	35	625	28	42	555	1,403	902	57	512	1,270	2,037	767		
Arkansas:															
5 cities.....	1909	339	8,411	319	1,010	7,082	19,934	14,846	1,089	4,036	10,362	18,694	8,332		
3 cities.....	1904	201	5,029	157	427	4,445		8,915	461	1,993	5,093	9,519	4,426		
3 cities.....	1899	165			363	3,064		5,469	314	1,243	3,219	6,321	3,102		
Argenta.....	1909	18	2,357	12	188	2,157	2,885	2,240	212	1,400	2,685	4,842	2,157		
Fort Smith.....	1909	83	1,793	87	251	1,455	4,202	3,206	278	741	2,006	3,739	1,733	38.7	
	1904	63	1,198	43	106	1,049		1,726	113	481	1,113	2,329	1,216	54.9	
	1899	66			63	677		897	56	256	651	1,401	750	66.2	
Hot Springs.....	1909	71	430	69	26	335	1,644	770	28	210	303	844	541		
Little Rock.....	1909	125	2,566	119	430	2,017	6,619	6,045	445	1,080	4,014	6,882	2,868	2.3	
	1904	104	2,305	97	237	1,971		4,493	249	938	2,559	4,690	2,131	41.1	
	1899	62			209	1,397		2,928	181	544	1,779	3,379	1,600	38.8	
Pine Bluff.....	1909	42	1,265	32	115	1,118	4,584	2,585	126	605	1,354	2,387	1,033	-21.5	
	1904	34	1,526	17	84	1,425		2,696	99	574	1,421	2,500	1,079	43.9	
	1899	37			91	990		1,644	77	443	789	1,541	762	-4.5	
California:															
21 cities.....	1909	4,881	88,562	5,529	13,434	69,599	137,073	268,250	16,406	53,580	168,922	294,851	125,929		
10 cities.....	1904	3,975	75,435	4,667	8,683	62,075		162,722	10,240	40,634	121,427	217,917	96,490		
10 cities.....	1899	2,967			5,062	47,953		102,781	5,530	25,664	90,674	151,246	60,572		
Alameda.....	1909	51	1,076	50	111	915	1,526	3,002	171	797	929	2,564	1,625	228.0	
	1904	30	326	32	15	279		541	20	241	233	697	464	-25.0	
	1899	23			23	372		749	43	216	788	1,335	547	-47.8	
Bakersfield.....	1909	27	844	20	78	746	910	1,791	94	664	1,700	2,819	1,119		
Berkeley.....	1909	84	1,420	115	221	1,084	2,433	3,465	254	840	2,687	4,435	1,748	220.7	
	1904	44	453	28	87	338		1,429	86	230	782	1,474	692	60.2	
	1899	22			19	211		456	14	99	392	651	259	126.4	
Eureka.....	1909	48	1,075	30	99	946	3,901	3,306	124	673	1,494	3,012	1,518		
Fresno.....	1909	76	2,262	43	281	1,938	3,403	4,933	328	1,103	7,992	11,090	3,098	1.2	
	1904	80	2,169	51	203	1,815		5,430	264	1,062	6,828	9,754	2,926	133.8	
	1899	62			87	819		1,435	86	396	1,704	2,752	1,048	254.4	
Long Beach.....	1909	51	413	49	87	277	1,450	1,326	87	207	498	927	429		
Los Angeles.....	1909	1,325	21,875	1,181	3,367	17,327	33,166	59,518	3,912	12,588	38,913	68,586	29,673	66.2	
	1904	814	13,189	761	2,004	10,424		28,181	1,997	7,088	18,689	34,814	16,125	101.5	
	1899	534			717	5,173		10,045	671	2,600	8,083	15,134	7,046	130.0	
Oakland.....	1909	441	8,538	554	1,079	6,905	13,683	19,113	1,300	5,317	11,847	22,343	10,496	105.9	
	1904	248	3,980	237	390	3,353		9,126	409	2,068	4,307	9,015	4,708	35.4	
	1899	195			264	2,476		5,173	246	1,210	2,704	5,368	2,664	67.9	
Pasadena.....	1909	88	708	92	117	499	969	1,347	118	380	854	1,724	870		
Pomona.....	1909	30	285	32	29	224	334	630	22	152	230	560	330		
Redlands.....	1909	37	260	36	77	147	439	1,104	47	100	239	518	279		

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.		Census.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Expressed in thousands.						PER CENT OF INCREASE.		
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number)		Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	Wage earners (average number).	Value of products.	
California.—Contd.																
Riverside.....	1909	53	399	56	76	267	700	\$1,102	\$50	\$214	\$667	\$1,178	\$511			
Sacramento.....	1909	211	5,266	219	533	4,514	8,517	10,097	616	3,918	6,894	13,977	7,083			
	1904	150	4,742	164	375	4,203		7,359	419	2,952	5,144	10,073	4,929	7.4	38.8	
	1899	111			170	3,686		6,856	202	2,519	5,345	9,495	4,150	14.0	6.1	
San Bernardino.....	1909	41	883	38	116	729	1,411	1,242	94	639	763	1,660	897			
San Diego.....	1909	117	1,440	99	270	1,071	3,269	5,326	263	806	2,667	4,741	2,074			
	1904	89	703	97	65	511		1,991	60	392	1,136	1,974	838	98.0	140.2	
	1899	57			43	255		990	42	148	281	670	389	112.2	194.6	
San Francisco.....	1909	1,796	36,910	2,544	6,122	28,244	49,934	133,824	8,086	22,381	76,217	133,041	56,824			
	1904	2,251	46,666	3,047	5,190	38,429		102,362	6,630	25,015	75,946	137,788	61,842	-26.5	-3.4	
	1899	1,749		3,413	3,413	32,555		69,643	3,929	17,259	65,535	107,024	41,489	18.0	28.7	
San Jose.....	1909	153	1,828	134	264	1,430	2,078	3,815	249	903	3,243	5,611	2,368			
	1904	153	1,025	145	220	1,260		3,083	190	682	2,512	4,298	1,786	13.5	30.5	
	1899	124			189	1,221		2,980	146	567	1,850	3,292	1,442	3.2	30.6	
Santa Barbara.....	1909	51	382	43	74	265	491	895	63	197	696	1,169	473			
Santa Cruz.....	1909	34	388	31	83	274	1,827	2,605	77	211	668	1,161	493			
Stockton.....	1909	144	2,039	141	304	1,594	5,016	8,250	376	1,306	8,320	11,849	3,529			
	1904	110	1,582	105	144	1,333		5,220	165	904	5,850	8,030	2,180	19.6	47.6	
	1899	91			137	1,185		4,454	151	650	3,987	5,525	1,538	12.5	45.3	
Vallejo.....	1909	23	271	22	46	203	1,616	1,559	75	184	1,404	1,896	492			
Colorado:																
4 cities.....	1909	949	17,647	719	2,814	14,114	29,199	54,563	3,464	9,945	33,558	57,430	23,872			
5 cities.....	1904	905	14,451	759	1,757	11,935		34,951	2,127	8,416	26,312	45,627	19,315			
	1899	746			1,252	11,093		37,130	1,995	8,416	30,524	46,515	15,991			
Colorado Springs.....	1909	59	694	40	138	516	907	2,023	144	413	823	1,733	910			
	1904	49	547	45	92	410		1,611	84	284	411	1,101	690	25.9	57.4	
	1899	34			78	409		1,127	50	225	365	845	480	0.2	30.3	
Cripple Creek.....	1904	22	89	22	16	51		96	17	44	76	223	147			
	1899	35			22	167		165	21	129	175	441	266	-69.5	-49.4	
Denver.....	1909	766	15,037	586	2,393	12,058	25,165	47,534	3,019	8,405	30,927	51,538	20,611			
	1904	722	11,752	596	1,484	9,672		27,434	1,818	6,711	21,000	35,660	15,660	24.7	40.6	
	1899	574			1,036	8,500		31,271	1,181	5,236	24,472	37,906	13,434	13.8	-3.3	
Leadville.....	1904	32	943	31	51	861		3,770	79	716	3,884	5,446	1,562			
	1899	34			46	1,227		3,383	73	727	4,840	5,883	1,043	-29.8	-7.4	
Pueblo.....	1909	94	1,637	73	244	1,320	2,276	4,137	264	957	1,497	3,345	1,843			
	1904	80	1,120	65	114	941		2,040	129	661	941	2,197	1,256	40.3	52.3	
	1899	69			70	790		1,184	70	458	672	1,440	768	19.1	52.6	
Trinidad.....	1909	30	279	20	39	220	851	869	37	170	311	814	503			
Connecticut:																
15 cities.....	1909	2,367	154,792	1,845	14,448	138,499	220,068	342,266	17,820	74,990	175,582	334,336	153,754			
12 cities.....	1904	1,851	116,969	1,559	9,302	106,048		218,679	11,268	54,049	115,587	226,147	110,580			
12 cities.....	1899	1,710			5,997	91,209		170,573	7,343	44,477	103,990	193,447	89,457			
Ansonia.....	1909	53	4,488	46	315	4,127	13,209	9,763	433	2,384	14,611	20,088	5,477			
	1904	49	3,739	40	305	3,394		1,683	377	1,683	15,308	19,132	3,824	21.6	5.0	
	1899	49			186	3,288		6,240	202	1,707	14,956	18,515	3,559	3.2	3.3	
Bridgeport.....	1909	367	28,952	243	2,834	25,775	43,387	62,779	3,709	13,349	37,947	65,600	27,662			
	1904	306	21,681	234	1,955	19,492		49,381	2,511	9,480	22,334	44,586	22,252	32.2	47.2	
	1899	286			1,057	17,038		31,625	1,434	7,885	17,287	33,536	16,249	14.4	32.9	
Danbury.....	1909	131	5,499	122	567	4,810	5,660	7,786	492	2,858	4,879	10,318	5,439			
	1904	103	5,030	107	403	4,515		4,037	346	2,264	3,695	8,066	4,371	6.5	27.9	
	1899	104			154	3,939		3,423	139	1,845	3,258	6,527	3,269	14.6	23.6	
Hartford.....	1909	396	17,447	320	2,500	14,627	19,410	48,085	2,710	9,374	17,863	40,680	22,817			
	1904	340	12,907	303	1,383	11,221		28,359	1,693	6,562	11,487	25,974	14,457	30.4	56.6	
	1899	322			1,149	10,677		28,057	1,374	5,950	11,369	23,829	12,460	5.1	9.0	
Meriden.....	1909	120	8,730	80	805	7,845	6,615	17,675	1,194	4,235	6,943	16,317	9,374			
	1904	97	7,945	82	582	7,281		16,442	807	3,669	5,644	13,764	8,120	7.7	18.5	
	1899	92			374	6,689		15,417	605	3,243	5,106	11,751	6,645	8.8	17.1	
Middletown.....	1909	58	2,678	38	206	2,434	3,333	3,544	247	1,003	2,943	4,955	2,012			
Naugatuck.....	1909	24	3,657	19	174	3,464	5,967	8,642	211	1,967	7,329	11,033	3,704			
	1904	22	3,787	14	145	3,623		7,900	184	1,998	7,260	11,010	3,750	-4.5	0.2	
	1899	22			82	3,160		6,607	121	1,601	6,072	8,887	2,815	14.8	23.9	
New Britain.....	1909	111	14,755	80	1,162	13,513	14,363	31,790	1,477	6,741	8,328	22,021	13,693			
	1904	95	10,921	65	783	10,073		19,980	892	4,687	5,668	14,960	9,292	34.2	47.2	
	1899	82			439	8,019		13,768	533	3,618	4,596	11,096	6,500	25.6	34.8	
New Haven.....	1909	590	26,874	536	2,791	23,547	31,382	52,014	3,462	12,776	24,319	51,071	26,752			
	1904	490	23,711	455	1,819	21,437		31,413	2,026	11,204	18,521	39,666	21,145	9.8	28.8	
	1899	437			1,396	17,594		27,962	1,443	8,520	16,136	34,900	18,764	21.8	13.7	
New London.....	1909	70	2,467	52	190	2,225	2,912	5,467	183	926	2,531	4,483	1,952			
	1904	57	2,747	42	151	2,554		4,590	162	1,070	2,527	4,710	2,183	-12.9	-4.8	
	1899	54			130	1,963		4,256	126	801	2,262	4,221	1,959	30.1	11.6	

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen-sus.	Number of estab-lish-ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Sala-ries.	Wages.	Cost of materials.	Value of products.	Value added by manu-facture (value of products less cost of materials).	PER CENT OF INCREASE.	
				Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).	Value of prod- ucts.
Expressed in thousands.																
Connecticut—Contd.																
	Norwich.....	1909	91	4,795	65	260	4,470	12,027	\$12,531	\$386	\$7,164	\$4,802	\$9,389	\$4,587	20.6	55.9
		1904	87	4,014	67	241	3,706		8,475	310	1,694	3,043	6,022	2,979	16.8	1.5
		1899	89			154	3,172		6,438	193	1,423	3,046	5,935	2,889		
	Stamford.....	1909	86	4,719	64	671	3,984	6,554	11,926	741	2,350	3,704	8,739	5,035	19.2	48.4
		1904	62	3,816	58	417	3,341		7,526	439	1,722	2,330	5,890	3,560	36.6	60.3
		1899	49			281	2,445		4,813	261	1,193	1,700	3,220	2,220		
	Torrington.....	1909	54	4,853	42	323	4,488	7,165	15,092	421	2,384	7,463	12,550	5,087		
	Waterbury.....	1909	169	21,600	97	1,333	20,170	37,518	44,653	1,926	11,244	28,726	50,350	21,624	30.9	55.6
		1904	143	16,671	92	1,173	15,406		32,950	1,521	8,016	17,770	32,367	14,597	16.5	6.7
		1899	124			595	13,225		21,967	912	6,661	18,202	30,330	12,128		
	Willimantic.....	1909	47	3,278	41	217	3,020	10,566	9,919	223	1,235	3,194	6,733	3,539		
Delaware:																
	1 city.....	1909	261	16,295	190	1,442	14,663	29,282	38,504	1,751	7,937	21,976	38,069	16,093		
	1 city.....	1904	245	14,806	192	1,106	13,508		33,102	1,262	6,513	18,121	30,285	12,164		
	1 city.....	1899	262			922	14,498		26,490	1,057	6,697	17,876	30,587	12,711		
	Wilmington.....	1909	261	16,295	190	1,442	14,663	29,282	38,504	1,751	7,937	21,976	38,069	16,093	8.6	25.7
		1904	245	14,806	192	1,106	13,508		33,102	1,262	6,513	18,121	30,285	12,164	-6.8	-1.0
		1899	262			922	14,498		26,490	1,057	6,697	17,876	30,587	12,711		
District of Columbia.																
		1909	518	9,758	475	1,576	7,707	16,563	30,553	1,846	4,989	10,247	25,289	15,042	22.4	37.7
		1904	482	7,778	473	1,006	6,299		20,200	1,207	3,658	7,732	18,359	10,627	2.3	11.8
		1899	491			957	6,155		17,960	872	3,023	7,475	16,426	8,951		
Florida:																
	4 cities.....	1909	445	16,260	461	1,423	14,376	9,556	22,753	2,062	8,233	13,968	30,303	16,335		
	4 cities.....	1904	378	13,710	414	1,143	12,153		14,510	1,208	6,452	9,967	22,795	12,828		
	4 cities.....	1899	229			390	7,544		8,575	455	3,719	5,905	13,023	7,118		
	Jacksonville.....	1909	114	2,455	80	387	1,988	5,105	7,068	455	988	3,997	6,722	2,725	-25.0	25.9
		1904	125	3,046	122	274	2,650		4,837	302	1,073	2,790	5,340	2,550	114.1	196.8
		1899	74			112	1,238		1,858	101	498	806	1,799	993		
	Key West.....	1909	56	2,693	72	190	2,431	295	1,911	257	1,397	1,643	3,965	2,322	-1.4	-6.8
		1904	73	2,787	103	218	2,466		1,512	229	1,325	1,806	4,254	2,448	36.3	37.8
		1899	53		60	1,809			1,738	82	1,074	1,231	3,088	1,857		
	Pensacola.....	1909	60	1,142	59	122	961	1,438	2,164	131	473	955	1,963	1,008	-20.3	1.3
		1904	39	1,354	28	120	1,206		2,147	122	476	820	1,937	1,117	108.6	84.0
		1899	32		39	578			1,158	34	246	502	1,053	551		
	Tampa.....	1909	215	9,970	250	724	8,996	2,658	11,610	1,219	5,375	7,373	17,653	10,280	54.3	56.7
		1904	141	6,523	161	531	5,831		6,014	545	3,578	4,551	11,264	6,713	48.8	59.0
		1899	70		179	3,919			3,821	238	1,901	3,366	7,083	3,717		
Georgia:																
	9 cities.....	1909	943	36,725	690	4,052	31,883	74,289	72,543	4,575	12,737	42,078	75,334	33,256		
	6 cities.....	1904	621	31,597	501	2,532	28,564		51,302	2,700	9,695	31,801	56,450	24,649		
	6 cities.....	1899	509			1,483	23,471		35,735	1,589	6,883	20,919	37,344	16,425		
	Athens.....	1909	37	1,104	41	101	962	2,209	1,921	104	294	1,329	2,112	783	89.0	82.4
		1904	28	590	23	58	509		946	49	140	753	1,158	405	-13.6	70.8
		1899	27			29	589		671	16	109	414	678	264		
	Atlanta.....	1909	483	15,091	367	2,422	12,302	22,768	30,878	2,711	5,436	16,418	33,038	16,620	3.5	28.3
		1904	294	13,417	223	1,303	11,891		21,631	1,361	4,435	13,441	25,746	12,305	49.3	78.6
		1899	196			692	7,966		14,603	759	2,597	7,443	14,419	6,976		
	Augusta.....	1909	71	5,442	45	324	5,073	13,324	11,066	412	1,741	6,602	10,456	3,854	4.8	18.4
		1904	64	5,189	59	291	4,839		8,101	304	1,294	5,953	8,829	2,876	-13.0	10.6
		1899	80			195	5,563		7,987	220	1,325	5,147	7,984	2,837		
	Brunswick.....	1909	23	450	11	54	385	712	452	50	191	258	672	414		
	Columbus.....	1909	55	4,944	26	257	4,661	14,741	7,997	320	1,031	5,562	8,552	2,990	5.1	20.8
		1904	52	4,702	25	243	4,434		5,874	272	1,305	4,284	7,060	2,796	7.9	39.9
		1899	58			162	4,110		4,710	159	1,009	2,956	5,061	2,105		
	Macon.....	1909	80	4,150	51	370	3,729	8,872	8,476	421	1,433	6,870	10,703	3,833	1.9	46.7
		1904	61	4,000	41	298	3,661		6,750	357	1,201	4,116	7,297	3,181	22.3	33.8
		1899	66			208	2,994		4,009	231	864	3,151	5,452	2,301		
	Rome.....	1909	36	1,129	15	100	1,014	2,265	1,551	110	320	1,078	1,864	786		
	Savannah.....	1909	137	3,196	121	348	2,727	6,403	9,334	382	1,222	3,349	6,734	3,385	-15.6	6.2
		1904	122	3,699	130	339	3,230		8,000	357	1,320	3,254	6,340	3,086	43.6	69.1
		1899	82			197	2,249		3,755	204	979	1,808	3,750	1,942		
	Waycross.....	1909	21	1,219	13	76	1,130	2,995	868	65	469	612	1,203	591		
Idaho:																
	1 city.....	1909	50	577	48	118	411	672	1,544	120	308	895	1,661	766		
	Boise.....	1909	50	577	48	118	411	672	1,544	120	308	895	1,661	766		
Illinois:																
	32 cities.....	1909	12,525	456,666	10,850	66,075	379,741	753,171	1,261,044	78,519	224,881	955,752	1,595,136	639,384		
	25 cities.....	1904	10,316	366,595	9,141	47,503	309,954		800,285	53,438	173,296	695,654	1,180,187	484,533		
	25 cities.....	1899	9,095			36,949	279,322		636,656	36,606	136,173	578,783	957,089	378,306		

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
				Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Expressed in thousands.																
Illinois—Continued.																
	Alton.....	1909	69	2,729	45	255	2,429	5,453	\$5,585	\$299	\$1,528	\$7,262	\$10,096	\$2,834	-20.9	16.1
		1904	62	3,346	37	240	3,069	.....	4,002	220	1,728	5,423	8,687	3,274	41.2	104.6
		1899	59	.....	.....	123	.....	.....	2,773	112	1,037	2,472	4,250	1,778	.....	.....
	Aurora.....	1909	165	5,884	165	624	5,095	7,906	11,427	722	2,936	5,581	10,954	5,373	24.9	49.5
		1904	103	4,517	91	348	4,078	.....	6,800	387	2,068	3,538	7,329	3,791	3.3	30.0
		1899	97	.....	.....	280	3,949	.....	4,666	275	1,615	2,592	5,638	3,046	.....	.....
	Belleville.....	1909	119	2,248	107	269	1,872	4,541	5,541	296	1,062	2,324	4,615	2,291	6.1	5.9
		1904	96	2,005	75	165	1,785	.....	3,084	171	1,011	1,787	4,357	2,570	32.2	51.7
		1899	89	.....	.....	118	1,335	.....	2,314	108	620	935	2,873	1,938	.....	.....
	Bloomington.....	1909	107	2,495	99	319	2,077	2,877	4,762	325	1,186	2,527	4,868	2,341	-8.7	-15.7
		1904	81	2,679	78	326	2,275	.....	3,947	298	1,228	3,462	5,777	2,285	36.1	91.8
		1899	68	.....	.....	166	1,671	.....	2,135	127	797	1,595	3,012	1,417	.....	.....
	Cairo.....	1909	56	1,444	51	156	1,237	4,764	4,854	178	628	2,957	4,440	1,483	-13.8	1.3
		1904	57	1,649	64	150	1,435	.....	3,086	153	653	2,838	4,382	1,544	-4.4	40.6
		1899	53	.....	.....	105	1,501	.....	1,936	92	548	1,900	3,116	1,216	.....	.....
	Canton.....	1909	33	1,421	39	120	1,262	3,716	8,189	129	692	1,183	2,942	1,769	.....	.....
	Champaign.....	1909	42	381	44	64	273	476	895	52	174	419	846	427	.....	.....
	Chicago.....	1909	9,656	350,954	8,156	54,821	293,977	525,236	971,841	65,925	174,112	793,470	1,281,171	487,701	21.5	34.1
		1904	8,159	289,529	7,269	40,276	241,984	.....	637,743	45,061	136,405	589,914	955,036	365,122	9.4	19.7
		1899	7,668	.....	.....	32,406	221,191	.....	511,249	32,068	108,727	502,222	797,879	295,657	.....	.....
	Chicago Heights..	1909	79	4,444	60	431	3,953	10,176	10,421	606	2,471	5,612	10,839	5,227	.....	.....
	Cicero ¹	1909	7	* 735	2	75	658	1,580	2,496	97	406	733	1,461	728	.....	.....
	Danville.....	1909	76	2,044	76	224	1,744	3,258	2,656	236	1,077	1,430	3,351	1,921	-7.4	1.4
		1904	70	2,109	77	148	1,884	.....	2,102	129	977	1,665	3,304	1,639	96.9	72.6
		1899	72	.....	.....	47	957	.....	1,413	47	458	1,047	1,914	867	.....	.....
	Decatur.....	1909	157	3,447	148	600	2,699	6,447	6,579	609	1,420	5,918	9,768	3,850	18.3	12.7
		1904	116	2,841	91	410	2,340	.....	4,874	373	1,125	5,593	8,667	3,074	21.9	68.8
		1899	108	.....	.....	217	1,920	.....	3,296	201	830	3,359	5,134	1,775	.....	.....
	East St. Louis....	1909	139	6,005	92	661	5,252	23,273	31,298	691	3,250	11,440	18,228	6,788	16.6	72.2
		1904	91	4,951	52	394	4,505	.....	12,854	473	2,494	5,696	10,586	4,890	45.0	69.6
		1899	58	.....	.....	112	3,106	.....	5,448	147	1,426	3,678	6,241	2,563	.....	.....
	Elgin.....	1909	115	6,583	100	389	6,094	6,059	16,079	491	3,379	4,538	11,120	6,582	24.7	18.9
		1904	76	5,253	72	296	4,885	.....	10,980	427	2,713	4,090	9,349	5,259	11.6	46.4
		1899	80	.....	.....	152	4,376	.....	8,383	189	2,074	2,614	6,386	3,772	.....	.....
	Evanston.....	1909	60	1,040	63	140	837	1,056	4,241	178	590	2,350	3,778	1,428	13.4	48.1
		1904	33	876	36	102	738	.....	1,723	76	384	1,583	2,551	968	84.5	207.3
		1899	27	.....	.....	29	400	.....	1,290	24	192	362	830	468	.....	.....
	Freeport.....	1909	69	3,225	56	316	2,853	4,412	6,403	307	1,570	4,417	7,811	3,394	88.2	151.2
		1904	61	1,754	70	168	1,516	.....	3,490	145	827	1,423	3,109	1,686	13.7	14.8
		1899	51	.....	.....	127	1,333	.....	2,010	118	695	1,314	2,708	1,394	.....	.....
	Galesburg.....	1909	62	1,738	58	215	1,465	1,968	2,454	201	887	1,416	2,919	1,503	1.2	31.6
		1904	58	1,665	46	172	1,447	.....	1,566	165	756	936	2,218	1,282	35.2	53.0
		1899	39	.....	.....	99	1,070	.....	1,285	89	521	620	1,450	830	.....	.....
	Jacksonville.....	1909	57	1,096	58	91	947	1,189	1,503	84	487	1,307	2,299	992	5.3	16.0
		1904	55	1,077	70	108	899	.....	1,817	115	458	1,102	1,982	880	-15.7	17.7
		1899	55	.....	.....	113	1,066	.....	1,296	103	433	850	1,684	834	.....	.....
	Joliet.....	1909	137	7,266	128	755	6,383	37,744	25,586	930	4,435	27,758	38,817	11,059	10.2	18.0
		1904	104	6,627	86	749	5,792	.....	14,136	853	3,699	21,259	22,897	11,638	.....	25.9
		1899	135	.....	.....	406	5,792	.....	15,040	345	3,548	17,193	26,132	8,939	.....	.....
	Kankakee.....	1909	55	1,552	60	143	1,349	3,988	2,599	105	622	1,493	2,723	1,230	30.0	30.3
		1904	49	1,205	47	120	1,038	.....	1,746	120	512	1,026	2,089	1,063	175.3	221.9
		1899	36	.....	.....	19	377	.....	604	19	162	289	649	360	.....	.....
	La Salle.....	1909	29	1,439	24	122	1,293	8,795	4,393	324	856	2,928	5,308	2,380	8.0	68.1
		1904	24	1,298	22	79	1,197	.....	2,053	139	685	1,878	3,158	1,280	30.5	-4.6
		1899	26	.....	.....	67	917	.....	2,020	177	447	2,397	3,309	912	.....	.....
	Lincoln.....	1909	40	308	49	39	220	385	611	32	115	290	570	280	.....	.....
	Mattoon.....	1909	35	1,102	39	115	948	1,019	832	94	561	669	1,434	765	.....	.....
	Moline.....	1909	66	6,106	44	613	5,449	10,230	26,334	888	3,523	11,189	20,892	9,703	36.7	58.8
		1904	62	4,474	45	442	3,987	.....	24,405	630	2,363	6,895	13,158	6,293	-3.6	41.5
		1899	55	.....	.....	332	4,138	.....	10,994	372	2,116	4,598	9,302	4,704	.....	.....
	Oak Park.....	1909	23	362	21	59	282	768	6,061	57	197	391	1,118	727	.....	.....
	Ottawa.....	1904	54	1,266	56	83	1,127	.....	2,489	123	618	773	2,078	1,305	10.5	19.6
		1899	57	.....	.....	108	1,020	.....	2,052	117	455	751	1,738	987	.....	.....
	Peoria.....	1909	283	7,323	242	1,100	5,981	16,266	24,945	1,331	3,552	17,773	63,061	45,288	2.5	4.4
		1904	263	6,797	227	736	5,834	.....	20,513	815	3,209	15,835	60,420	44,585	-2.7	35.6
		1899	291	.....	.....	686	5,996	.....	26,638	709	2,872	12,985	44,569	31,584	.....	.....
	Quincy.....	1909	235	5,056	201	823	4,032	7,557	11,906	680	2,063	5,792	11,436	5,644	-12.4	6.4
		1904	234	5,509	207	700	4,602	.....	9,470	643	2,206	5,188	10,748	5,560	20.6	35.7
		1899	198	.....	.....	408	3,815	.....	6,443	364	1,602	4,351	7,919	3,568	.....	.....

¹ While the population for 1900 was in excess of 10,000, statistics for that census are not available.

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen- sus.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.										
			Number of estab- lish- ments.	Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).										
Illinois—Continued.																									
	Rock Island.....	1909	74	2,179	51	374	1,754	3,173	\$9,287	\$366	\$1,026	\$2,818	\$5,387	\$2,569	3.0	1.0									
		1904	72	2,027	58	266	1,703		7,203	292	895	2,580	5,333	2,753	-9.7	15.4									
		1899	66			184	1,885		4,702	190	962	2,683	4,622	1,939											
	Rockford.....	1909	205	10,523	208	1,006	9,309	16,217	22,412	1,131	5,213	10,582	22,266	11,684	28.6	45.8									
		1904	180	7,969	112	618	7,239		14,159	669	3,608	8,066	15,276	7,210	23.7	38.6									
		1899	159			430	5,851		13,613	405	2,397	6,202	11,022	4,820											
	Springfield.....	1909	171	4,355	174	529	3,662	6,368	7,174	466	2,096	4,204	8,497	4,293	18.9	46.6									
		1904	122	3,546	118	357	3,071		5,264	383	1,639	2,490	5,797	3,307	39.7	67.2									
		1899	106			174	2,199		3,459	164	1,037	1,412	3,467	2,055											
	Streator.....	1909	45	1,409	44	90	1,275	3,140	4,588	103	644	817	2,137	1,320	-17.4	13.1									
		1904	34	1,629	35	50	1,544		1,379	68	1,035	584	1,839	1,305	20.3	51.7									
		1899	42			41	1,283		937	44	602	362	1,245	383											
	Waukegan.....	1909	59	3,773	146	537	3,090	23,144	17,022	586	2,103	14,164	19,984	5,820											
Indiana:																									
	24 cities.....	1909	2,975	130,955	2,293	16,004	112,658	210,947	285,726	18,115	57,040	200,150	348,760	148,610											
	19 cities.....	1904	2,538	97,420	2,138	9,665	85,617		170,594	9,879	40,649	123,046	219,425	90,379											
	19 cities.....	1899	2,334			6,638	78,097		127,335	6,567	33,823	120,111	208,227	88,116											
	Anderson.....	1909	116	5,109	89	627	4,393	12,981	10,728	597	2,104	8,127	13,765	5,638	42.7	68.3									
		1904	102	3,491	80	332	3,079		6,649	312	1,531	4,860	8,181	3,321	-12.9	-1.4									
		1899	96			244	3,537		5,080	245	1,844	4,440	8,296	3,856											
	East Chicago.....	1909	16	2,568	6	192	2,370	7,017	4,614	247	1,285	3,060	5,483	2,423											
	Elkhart.....	1909	69	3,508	51	447	3,010	4,623	5,478	612	1,534	3,021	6,932	3,911	32.9	59.5									
		1904	58	2,602	36	301	2,265		3,291	281	1,037	2,016	4,345	2,329	6.7	10.5									
		1899	57			219	2,123		2,790	167	1,012	1,882	3,933	2,051											
	Elwood.....	1909	37	2,301	30	198	2,073	6,122	4,572	227	1,399	6,249	8,408	2,159	16.5	37.6									
		1904	32	1,995	27	89	1,779		3,303	79	1,011	4,397	6,111	1,714	-35.2	-35.2									
		1899	46			102	2,745		4,362	112	1,665	6,755	9,433	2,678											
	Evansville.....	1909	299	10,162	231	934	8,997	18,849	20,093	1,039	3,965	12,794	22,929	10,135	16.0	26.7									
		1904	268	8,771	251	762	7,758		14,337	818	3,430	10,122	18,091	7,969	23.5	48.7									
		1899	273			561	6,284		9,428	596	2,451	6,545	12,168	5,623											
	Fort Wayne.....	1909	230	12,184	205	1,681	10,298	15,063	20,346	1,795	5,023	11,415	23,687	12,272	33.2	69.1									
		1904	193	8,845	183	933	7,729		12,363	978	3,595	7,019	14,011	6,992	18.6	24.4									
		1899	178			601	6,519		8,674	528	2,627	6,032	11,263	5,231											
	Hammond.....	1909	49	4,379	33	505	3,841	7,348	16,271	614	1,861	6,651	15,580	8,929	148.1	103.1									
		1904	38	1,702	26	128	1,548		5,975	213	879	2,545	7,671	5,126	-42.3	-69.4									
		1899	21			290	2,683		6,301	331	1,237	20,202	25,070	4,868											
	Huntington.....	1909	33	1,575	24	175	1,376	1,400	1,302	175	623	1,130	2,228	1,098											
	Indianapolis.....	1909	855	37,929	631	5,483	31,815	50,872	76,497	6,494	16,557	84,151	126,522	42,371	19.0	53.9									
		1904	810	31,431	591	4,115	26,725		53,420	4,096	12,620	51,763	82,228	30,465	27.4	38.6									
		1899	697			2,325	20,985		34,736	2,248	8,844	38,287	59,322	21,035											
	Jeffersonville.....	1909	35	919	29	124	766	3,422	2,682	152	437	1,083	1,916	833	-48.7	-57.7									
		1904	33	1,598	34	72	1,492		2,487	74	816	2,827	4,526	1,999	-1.6	20.0									
		1899	34			68	1,516		2,451	110	778	2,436	3,772	1,336											
	Kokomo.....	1909	72	2,366	52	263	2,051	3,955	3,921	294	1,075	2,982	5,451	2,469	7.0	49.3									
		1904	61	2,131	52	162	1,917		3,384	157	966	1,594	3,651	2,057	41.5	77.1									
		1899	62			90	1,355		2,266	83	528	1,010	2,062	1,052											
	La Fayette.....	1909	69	1,983	32	291	1,660	3,526	3,914	281	919	3,446	5,542	2,096	-7.1	19.7									
		1904	80	2,097	49	262	1,786		3,617	264	834	2,703	4,631	1,928	33.0	31.8									
		1899	85			266	1,343		2,880	246	573	1,990	3,514	1,524											
	Laporte.....	1909	41	1,960	26	260	1,674	3,373	5,872	323	795	1,814	3,972	2,158											
	Logansport.....	1909	68	2,412	75	168	2,169	2,338	2,004	162	1,237	1,982	4,201	2,219	26.1	42.1									
		1904	61	1,976	72	154	1,720		1,920	149	850	1,562	2,956	1,394	30.7	40.8									
		1899	68			70	1,316		1,646	51	588	1,026	2,100	1,074											
	Marion.....	1909	99	2,610	64	277	2,269	6,206	3,934	271	1,182	2,324	4,442	2,118	2.3	10.1									
		1904	96	2,507	91	197	2,219		3,466	203	1,129	1,738	4,034	2,290	-21.9	-12.2									
		1899	61			173	2,843		3,316	154	1,337	2,199	4,593	2,394											
	Michigan City.....	1909	48	3,123	40	196	2,887	5,900	8,890	312	1,263	5,365	8,290	2,925	-8.1	31.3									
		1904	52	3,314	44	130	3,149		4,293	149	1,453	3,980	6,314	2,354	7.8	4.7									
		1899	41			91	2,912		4,215	104	1,033	3,961	6,032	2,071											
	Mishawaka.....	1909	42	3,934	22	457	3,445	7,610	14,224	810	1,748	5,270	10,883	5,613											
	Muncie.....	1909	102	4,444	83	328	4,032	7,504	6,627	350	2,126	5,474	9,684	4,210	41.3	64.4									
		1904	97	3,195	93	158	2,855		4,400	170	1,400	3,320	5,891	2,571	-25.8	-16.3									
		1899	90			173	3,848		3,613	210	1,958	3,848	7,042	3,194											
	New Albany.....	1909	95	2,135	80	145	1,910	3,954	3,566	166	724	1,886	3,493	1,607	-14.7	-8.9									
		1904	93	2,444	83	121	2,240		2,491	126	996	2,041	3,835	1,794	4.8	5.4									
		1899	95			104	2,137		2,798	104	732	2,116	3,638	1,522											
	Peru.....	1909	31	692	40	33	619	2,013	1,654	39	276	482	1,097	615											

1 Does not include statistics for Gary.

INDIVIDUAL CITIES.

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COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES:
1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.										
				Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earn- ers (average number).								Wage earn- ers (average number).										
Indiana—Continued.																									
Richmond.....	1909	107	4,433	80	732	3,621	5,087	\$13,139	\$676	\$1,834	\$5,118	\$10,374	\$5,256	21.9	54.1										
	1904	98	3,483	65	448	2,970		9,508	478	1,381	3,001	6,732	3,731	10.5	41.6										
	1899	88			345	2,688		5,044	322	1,183	2,231	4,754	2,523												
South Bend.....	1909	218	13,609	158	1,664	11,789	16,280	41,467	1,612	5,886	15,253	27,854	12,601	31.0	83.5										
	1904	156	9,905	128	780	8,997		26,197	848	3,978	8,170	15,180	7,010	17.2	17.1										
	1899	131			521	7,678		17,826	566	3,136	6,841	12,960	6,119												
Terre Haute.....	1909	170	5,159	142	658	4,359	10,460	10,371	701	2,518	8,657	21,793	13,136	7.8	21.0										
	1904	178	4,594	177	373	4,044		7,391	383	2,134	7,647	18,008	10,361	-13.6	-31.5										
	1899	143			326	4,679		8,454	335	1,953	7,369	26,296	18,927												
Vincennes.....	1909	84	1,461	72	156	1,233	5,044	3,560	166	669	2,416	4,234	1,818	-8.9	39.8										
	1904	62	1,528	56	118	1,354		2,102	101	600	1,741	3,029	1,288	49.4	53.1										
	1899	48			69	906		1,455	55	344	941	1,979	1,038												
Iowa:																									
17 cities.....	1909	1,987	54,933	1,650	8,433	44,845	83,955	120,936	8,592	23,105	126,158	189,271	63,115												
14 cities.....	1904	1,548	40,016	1,306	4,691	34,019		79,060	4,523	15,955	72,520	112,180	39,640												
14 cities.....	1899	1,417			3,710	29,798		61,399	3,444	12,112	57,848	89,631	31,785												
Boone.....	1909	34	429	38	61	330	456	918	42	232	283	682	399												
Burlington.....	1909	128	4,790	90	510	4,190	5,346	7,003	454	1,723	4,645	8,443	3,798	43.7	46.1										
	1904	109	3,335	97	323	2,915		5,031	312	1,418	2,706	5,779	3,073	41.9	29.9										
	1899	125			286	2,054		3,993	193	785	2,442	4,450	2,008												
Cedar Rapids.....	1909	153	4,520	125	830	3,565	7,224	11,481	748	1,869	18,650	24,824	6,174	9.4	52.5										
	1904	134	3,782	92	431	3,259		8,697	409	1,465	12,280	16,290	4,000	37.3	46.2										
	1899	89			295	2,374		5,759	268	986	8,163	11,136	2,973												
Clinton.....	1909	69	2,752	35	303	2,414	6,391	6,532	359	1,273	4,630	7,480	2,850	12.1	52.5										
	1904	83	2,450	61	236	2,153		4,381	257	1,044	4,906	4,906	2,260	-13.9	-20.9										
	1899	81			185	2,502		3,973	221	980	3,910	6,203	2,293												
Council Bluffs.....	1909	101	1,825	90	301	1,434	1,756	2,893	248	845	1,957	3,769	1,812	43.3	95.9										
	1904	71	1,167	63	103	1,001		1,472	97	530	930	1,924	994	27.0	13.7										
	1899	74			107	788		960	99	387	824	1,692	868												
Davenport.....	1909	232	5,302	204	867	4,231	9,166	15,306	926	2,178	11,571	18,802	7,231	10.2	37.3										
	1904	173	4,517	144	533	3,840		13,064	547	1,756	8,839	13,696	4,857	12.8	38.7										
	1899	163			424	3,403		10,219	430	1,457	6,057	9,872	3,815												
Des Moines.....	1909	387	7,637	276	1,978	5,383	10,106	17,880	2,020	2,945	13,565	23,585	10,020	29.6	56.3										
	1904	291	5,328	241	932	4,155		9,594	985	2,083	8,644	15,065	6,441	19.4	79.6										
	1899	218			656	3,479		7,417	558	1,474	4,138	8,397	4,259												
Dubuque.....	1909	156	6,063	148	747	5,168	9,623	12,269	744	2,606	9,110	15,376	6,266	20.9	65.7										
	1904	156	5,043	123	646	4,274		9,437	538	1,913	4,706	9,279	4,573	-8.2	-3.9										
	1899	161			561	4,658		7,507	445	1,675	5,358	9,651	4,293												
Fort Dodge.....	1909	44	1,306	30	161	1,115	2,204	3,093	196	421	1,812	2,975	1,163	16.0	-1.7										
	1904	42	1,111	31	119	961		3,701	121	477	1,702	3,026	1,324	146.4	200.8										
	1899	30			79	390		769	59	171	679	1,006	327												
Iowa City.....	1909	44	465	60	123	282	814	746	96	143	340	805	465												
Keokuk.....	1909	91	1,872	86	245	1,541	3,210	4,334	334	776	4,684	7,399	2,715	0.5	75.1										
	1904	80	1,777	76	168	1,533		3,148	152	674	2,234	4,226	1,992	12.6	38.6										
	1899	88			328	1,362		1,956	427	490	1,591	3,049	1,458												
Marshalltown.....	1909	49	1,590	40	185	1,365	1,975	2,558	197	806	3,179	4,822	1,643	53.7	56.1										
	1904	44	1,084	42	154	888		1,441	135	447	2,140	3,990	950	-20.1	-21.9										
	1899	44			90	1,112		5,636	99	520	2,796	3,957	1,161												
Mason City.....	1909	49	963	25	131	807	3,729	2,156	198	470	1,796	2,881	1,085												
Muscatine.....	1909	113	3,862	122	244	3,496	4,560	6,774	244	1,575	2,738	6,166	3,428	26.5	22.3										
	1904	107	3,061	131	167	2,763		4,860	165	1,114	3,015	5,040	2,025	6.7	-3.4										
	1899	105			136	2,589		3,567	129	950	3,515	5,220	1,705												
Ottumwa.....	1909	93	3,058	94	314	2,650	4,332	5,809	314	1,319	12,166	14,838	2,672	15.0	43.0										
	1904	62	2,589	62	223	2,304		4,993	228	896	8,533	10,374	1,841	26.6	19.5										
	1899	61			182	1,820		3,233	168	699	6,900	8,683	1,783												
Sioux City.....	1909	136	4,755	110	895	3,750	8,807	13,603	939	2,131	30,388	37,425	7,037	63.1	153.5										
	1904	106	2,763	91	373	2,209		5,889	333	1,263	11,396	14,761	3,365	-6.7	3.8										
	1899	123			276	2,463		5,258	271	1,169	10,130	14,227	4,097												
Waterloo.....	1909	108	3,744	77	543	3,124	4,247	7,581	533	1,793	4,642	8,999	4,357	86.6	91.7										
	1904	90	2,009	52	283	1,674		3,352	244	885	2,749	4,694	1,945	108.2	124.8										
	1899	55			105	804		1,152	77	379	1,343	2,088	745												
Kansas:																									
12 cities.....	1909	1,043	31,640	973	4,433	26,234	69,233	81,273	4,729	14,985	159,810	228,975	39,165												
9 cities.....	1904	647	22,469	653	2,258	19,568		46,335	2,287	10,059	107,201	130,028	22,827												
9 cities.....	1899	613			2,806	16,790		28,990	2,520	7,983	82,490	100,861	18,371												
Atchison.....	1909	68	1,044	67	153	824	2,726	2,183	147	458	3,137	4,405	1,268	3.3	15.0										
	1904	60	961	61	102	798		1,873	79	366	2,956	3,829	873	36.9	82.9										
	1899	39			41	583		939	30	280	1,502	2,093	591												
Coffeyville.....	1909	47	1,240	31	140	1,069	3,375	3,746	153	663	3,492	4,752	1,260												
Fort Scott.....	1909	36	359	34	59	266	657	626	49	130	670	1,010	340	9.0	28.5										
	1904	46	333	51	38	244		650	30	127	463	786	323	-37.3	10.1										
	1899	32			29	389		578	26	198	379	714	335												

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).
Expressed in thousands.																
Kansas—Continued.																
Galena.....	1904	15	161	18	13	130	.....	\$250	\$12	\$70	\$688	\$797	\$109	14.0	89.3
	1899	19	.....	.....	6	114	.....	116	5	66	316	421	105	.....	.....
Hutchinson.....	1909	67	876	68	141	667	3,396	3,270	140	320	2,673	3,614	941	.....	.....
Independence.....	1909	31	328	30	46	252	945	793	42	148	392	757	365	.....	.....
Kansas City.....	1909	165	14,333	142	1,897	12,294	31,885	42,817	2,138	7,027	144,390	164,081	19,691	16.8	70.1	
	1904	100	11,761	82	1,150	10,529	.....	27,773	1,216	5,449	83,883	96,473	12,590	11.0	20.6
	1899	114	.....	.....	2,063	9,483	.....	18,236	1,911	4,259	68,875	80,023	11,148	.....	.....
Lawrence.....	1909	49	535	45	68	422	2,540	814	62	195	1,155	1,653	498	5.0	151.2	
	1904	39	477	37	38	402	.....	730	30	172	317	658	341	-12.8	-46.9
	1899	39	.....	.....	44	461	.....	667	30	153	892	1,239	347	.....	.....
Leavenworth.....	1909	79	1,644	77	256	1,311	3,005	3,111	295	702	3,198	4,875	1,677	-0.8	17.4	
	1904	89	1,619	88	210	1,321	.....	2,961	201	600	2,588	4,152	1,564	15.8	27.7
	1899	89	.....	.....	194	1,141	.....	2,705	177	520	1,961	3,251	1,270	.....	.....
Parsons.....	1909	25	1,200	29	41	1,130	2,093	1,530	49	722	735	1,626	891	.....	.....
Pittsburg.....	1909	49	1,152	50	130	972	2,268	1,786	154	633	724	1,817	1,093	5.8	21.6	
	1904	34	1,045	32	94	919	.....	1,366	95	522	646	1,494	848	4.2	4.2
	1899	33	.....	.....	28	882	.....	750	27	423	911	1,434	523	.....	.....
Topeka.....	1909	202	5,230	202	784	4,244	9,435	10,748	755	2,521	12,259	17,821	5,562	7.4	23.3	
	1904	154	4,513	174	386	3,953	.....	6,597	385	2,146	10,233	14,449	4,216	37.5	72.9
	1899	145	.....	.....	280	2,874	.....	3,304	215	1,705	5,278	8,357	3,079	.....	.....
Wichita.....	1909	225	3,699	198	718	2,783	6,908	9,849	745	1,466	16,985	22,564	5,579	120.5	205.3	
	1904	110	1,599	110	227	1,202	.....	4,135	239	607	5,427	7,390	1,963	46.2	122.0
	1899	103	.....	.....	121	863	.....	1,665	99	379	2,356	3,329	973	.....	.....
Kentucky:																
8 cities.....	1909	1,562	47,570	1,252	6,387	39,931	78,418	106,192	7,348	18,508	71,504	133,825	62,321	.....	.....
7 cities.....	1904	1,408	41,965	1,245	4,268	36,452	.....	100,295	4,445	15,643	57,072	106,437	49,365	.....	.....
7 cities.....	1899	1,433	.....	.....	3,193	32,329	.....	57,171	3,204	12,023	42,683	82,775	40,092	.....	.....
Covington.....	1909	196	4,528	189	397	3,942	8,256	6,634	427	1,838	4,471	8,712	4,241	6.5	42.8	
	1904	199	4,150	203	244	3,703	.....	6,725	256	1,453	2,610	6,100	3,490	15.3	11.3
	1899	204	.....	.....	199	3,212	.....	4,228	199	1,200	2,517	5,479	2,962	.....	.....
Frankfort.....	1909	31	727	26	164	537	1,331	2,403	224	232	1,968	3,083	1,115	.....	.....
Henderson.....	1909	43	1,210	40	82	1,088	3,270	2,257	87	413	1,722	2,932	1,210	137.0	114.8	
	1904	34	658	31	68	469	.....	1,453	61	186	762	1,365	603	30.4	32.3
	1899	26	.....	.....	34	352	.....	653	28	127	581	1,032	451	.....	.....
Lexington.....	1909	85	1,807	70	205	1,032	2,579	1,896	194	511	1,249	2,851	1,602	-7.4	2.7	
	1904	84	1,389	79	196	1,114	.....	2,064	148	455	1,386	2,775	1,389	39.8	46.9
	1899	88	.....	.....	120	797	.....	1,366	88	316	986	1,889	903	.....	.....
Louisville.....	1909	903	32,397	669	4,705	27,023	49,926	79,437	5,533	12,460	54,128	101,284	47,156	8.2	21.7	
	1904	842	28,817	706	3,126	24,985	.....	79,999	3,367	10,812	45,682	83,204	37,522	8.3	25.9
	1899	860	.....	.....	2,491	23,062	.....	44,016	2,565	8,436	34,876	66,110	31,234	.....	.....
Newport.....	1909	144	2,995	146	217	2,632	3,750	4,568	277	1,341	3,366	6,491	3,125	34.4	24.1	
	1904	105	2,220	102	160	1,958	.....	2,816	191	1,052	2,972	5,231	2,259	0.2	47.4
	1899	134	.....	.....	109	1,955	.....	2,389	117	873	1,473	3,548	2,075	.....	.....
Owensboro.....	1909	69	1,340	48	228	1,064	4,059	4,294	214	468	2,252	3,505	1,253	-23.6	5.6	
	1904	60	1,027	52	183	1,392	.....	2,845	160	500	1,815	3,319	1,504	56.4	90.7
	1899	51	.....	.....	116	890	.....	1,960	78	276	915	1,740	825	.....	.....
Paducah.....	1909	91	3,066	64	389	2,613	5,247	4,703	392	1,245	2,348	4,967	2,619	-8.0	11.8	
	1904	84	3,204	72	291	2,841	.....	4,393	272	1,185	1,845	4,443	2,598	37.8	49.2
	1899	70	.....	.....	124	2,061	.....	2,559	99	795	1,335	2,977	1,642	.....	.....
Louisiana:																
6 cities.....	1909	1,028	24,995	908	3,500	20,587	53,290	65,901	3,831	9,858	53,569	87,890	34,311	.....	.....
3 cities.....	1904	790	22,476	684	2,542	19,250	.....	60,842	2,612	8,366	60,710	85,632	24,922	.....	.....
3 cities.....	1899	747	.....	.....	1,660	17,250	.....	44,834	1,759	6,607	41,673	59,720	18,047	.....	.....
Alexandria.....	1909	30	628	26	89	513	3,910	1,638	95	235	598	1,279	681	.....	.....
Baton Rouge.....	1909	33	438	46	35	357	1,522	909	37	143	336	658	322	-42.4	-52.4	
	1904	37	719	30	69	620	.....	1,291	65	309	598	1,383	785	88.4	92.6
	1899	134	.....	.....	40	329	.....	747	32	111	387	718	331	.....	.....
Lake Charles.....	1909	33	846	20	90	736	3,777	1,619	128	395	1,269	2,251	982	.....	.....
Monroe.....	1909	23	764	21	62	681	2,894	1,082	76	394	545	1,255	710	.....	.....
New Orleans.....	1909	848	20,938	754	2,998	17,186	38,145	56,934	3,240	8,020	48,732	78,794	30,062	-1.6	-3.2	
	1904	690	20,406	606	2,332	17,468	.....	56,995	2,386	7,396	58,828	81,411	22,583	7.9	41.7
	1899	688	.....	.....	1,579	16,185	.....	42,858	1,667	6,176	40,385	57,446	17,061	.....	.....
Shreveport.....	1909	61	1,381	41	226	1,114	3,042	3,719	255	671	2,069	3,643	1,554	-4.1	28.4	
	1904	63	1,351	48	141	1,162	.....	2,556	161	661	1,284	2,838	1,554	57.9	82.4
	1899	46	.....	.....	71	736	.....	1,229	60	320	901	1,556	655	.....	.....
Maine:																
7 cities.....	1909	675	27,907	551	1,903	25,453	58,745	45,234	2,023	11,689	28,074	51,467	23,393	.....	.....
7 cities.....	1904	606	26,115	558	1,323	23,234	.....	34,828	1,430	9,765	23,231	41,966	18,735	.....	.....
7 cities.....	1899	631	.....	.....	1,126	23,190	.....	33,534	1,133	9,099	19,329	36,896	17,567	.....	.....

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899.—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.			
				Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).	Value of products.	Wage earners (average number).	Value of products.
	Maine—Continued.																	
	Auburn.....	1909	83	3,778	73	253	3,452	3,445	\$4,085	\$298	\$1,748	\$5,790	\$8,843	\$3,053	30.2	38.6		
		1904	72	2,869	65	152	2,632		2,826	174	1,216	4,417	6,407	1,990	-3.5	7.4		
		1899	67			201	2,749		3,246	171	1,156	3,987	5,965	1,978				
	Augusta.....	1909	40	2,431	30	305	2,096	5,350	3,414	232	1,159	2,464	4,662	2,178	12.7	19.9		
		1904	44	2,026	41	125	1,860		2,286	134	702	1,887	3,887	2,000	-7.8	17.3		
		1899	52			94	2,018		3,296	112	667	1,212	3,313	2,161				
	Bangor.....	1909	122	1,672	117	228	1,327	2,441	3,565	204	735	1,847	3,346	1,499	-11.3	-1.8		
		1904	87	1,709	85	128	1,496		2,944	129	748	1,737	3,408	1,671	-1.0	2.2		
		1899	101			148	1,511		2,125	127	695	1,905	3,336	1,431				
	Bath.....	1904	46	2,090	40	100	1,950		2,227	162	1,067	1,982	3,654	1,672	-7.0	-1.2		
		1899	54			81	2,097		2,968	83	1,108	1,938	3,697	1,759				
	Biddeford.....	1909	43	5,178	45	57	5,076	17,038	7,172	122	1,993	4,898	9,012	4,114	6.5	29.7		
		1904	33	4,890	34	92	4,764		7,000	126	1,791	4,136	6,949	2,813	8.9	27.0		
		1899	39			44	4,375		6,924	76	1,487	2,966	5,472	2,506				
	Lewiston.....	1909	83	7,050	76	186	6,788	19,438	12,639	308	2,741	5,275	10,475	5,200	19.1	22.8		
		1904	81	6,419	85	167	6,107		11,265	290	2,168	4,717	8,828	3,811	-7.6	9.6		
		1899	84			152	6,677		10,657	193	2,307	3,718	7,779	4,061				
	Portland.....	1909	271	5,891	193	796	4,902	7,849	9,697	770	2,508	6,009	11,950	5,941	12.8	30.8		
		1904	243	5,112	208	559	4,345		6,280	485	2,073	4,355	9,133	4,778	15.5	24.5		
		1899	234			406	3,763		5,318	371	1,679	3,603	7,334	3,781				
	Waterville.....	1909	33	1,907	17	78	1,812	3,184	4,762	89	805	1,771	3,179	1,408				
	Maryland:																	
	4 cities.....	1909	2,704	88,795	2,855	9,816	76,124	85,940	173,872	10,969	33,063	113,573	197,620	84,047				
	3 cities.....	1904	2,297	79,203	2,552	7,115	69,536		153,294	7,313	27,309	84,884	157,793	72,909				
	3 cities.....	1899	2,410			5,708	69,729		110,690	6,030	24,567	77,996	139,828	61,832				
	Baltimore.....	1909	2,502	83,473	2,660	9,369	71,444	76,764	164,437	10,571	31,171	107,024	186,978	79,954	9.8	24.5		
		1904	2,158	74,234	2,432	6,752	65,050		146,961	6,997	26,507	80,555	150,171	69,616	-2.3	11.1		
		1899	2,274			5,501	66,571		107,217	5,871	23,493	75,223	135,108	59,885				
	Cumberland.....	1909	71	2,200	53	211	1,936	5,119	4,095	185	948	2,676	4,534	1,858	-14.9	-1.3		
		1904	72	2,512	55	181	2,276		4,139	200	1,084	2,678	4,595	1,917	35.5	58.4		
		1899	56			124	1,643		2,352	111	684	1,674	2,900	1,226				
	Frederick.....	1909	55	1,184	63	95	1,026	1,989	2,370	97	361	2,075	2,911	836				
	Hagerstown.....	1909	76	1,938	79	141	1,718	2,068	2,970	116	583	1,798	3,197	1,399	-22.3	5.6		
		1904	67	2,457	65	182	2,210		2,194	116	718	1,651	3,027	1,376	45.9	66.3		
		1899	80			83	1,515		1,121	48	390	1,099	1,820	721				
	Massachusetts:																	
	55 cities.....	1909	9,210	528,414	8,792	41,856	477,766	877,720	1,072,533	53,687	246,794	687,417	1,236,269	548,852				
	47 cities.....	1904	8,039	416,532	8,440	27,909	280,483		774,184	32,966	182,779	489,249	880,764	391,515				
	47 cities.....	1899	8,210			21,095	341,251		628,035	24,258	153,277	389,471	715,627	326,156				
	Adams.....	1909	31	4,100	32	77	3,991	10,173	8,019	183	1,719	3,082	6,410	3,328	-0.1	16.7		
		1904	23	4,089	25	70	2,994		6,945	151	1,509	2,688	5,492	2,804	25.5	41.0		
		1899	26			51	3,182		6,560	125	1,166	1,713	3,894	2,181				
	Arlington.....	1909	19	335	18	34	283	851	778	46	177	311	695	384				
	Attleborough.....	1909	128	7,168	132	607	6,429	5,991	14,305	785	3,763	6,813	15,160	8,347	27.5	50.8		
		1904	108	5,553	128	381	5,044		10,438	451	2,474	4,651	10,050	5,599	4.8	14.8		
		1899	108			273	4,811		5,724	285	2,191	3,796	8,751	4,955				
	Beverly.....	1909	63	4,896	60	349	4,487	3,778	8,658	496	2,929	3,291	8,653	5,362	115.4	111.0		
		1904	71	2,292	91	118	2,083		1,900	93	1,098	2,323	4,101	1,778	-8.4	8.5		
		1899	73			96	2,275		2,112	64	1,021	2,149	3,781	1,632				
	Boston.....	1909	3,155	85,158	2,873	12,648	69,637	68,419	175,182	15,641	39,910	124,577	237,457	112,890	17.7	28.8		
		1904	2,747	71,421	2,853	9,428	59,160		131,563	10,464	31,873	94,603	184,351	89,748	11.9	13.3		
		1899	2,878			7,691	52,853		130,143	8,180	28,209	82,295	162,766	80,470				
	Brocton.....	1909	196	16,291	176	1,378	14,737	9,773	18,978	1,696	9,122	23,565	45,972	17,407	6.1	21.6		
		1904	201	15,007	228	890	13,889		15,336	931	8,838	22,553	37,791	15,238	34.9	52.0		
		1899	186			604	10,296		9,635	639	5,775	15,333	24,855	9,522				
	Brookline.....	1909	16	404	19	45	340	339	617	37	194	196	532	326	-31.3	-27.4		
		1904	13	552	14	43	495		618	43	296	271	733	462	52.8	51.1		
		1899	8			21	324		320	25	198	219	485	266				
	Cambridge.....	1909	275	17,475	223	1,992	15,260	21,372	37,929	2,404	8,365	23,566	44,227	20,661	4.6	4.3		
		1904	262	16,343	279	1,478	14,586		32,260	1,713	7,494	25,117	42,407	17,290	31.8	45.8		
		1899	243			1,033	11,070		24,591	1,221	5,451	18,773	29,092	12,319				
	Chelsea.....	1909	110	6,694	98	642	5,854	8,339	11,021	869	3,326	10,569	17,003	6,434	20.6	22.5		
		1904	130	5,532	139	454	4,936		9,684	581	2,442	8,307	13,879	5,572	66.9	45.8		
		1899	120			328	2,959		7,960	343	1,406	5,461	9,519	4,058				
	Chicopee.....	1909	58	7,776	45	471	7,260	18,738	14,803	468	3,696	10,952	19,219	8,287	55.5	149.1		
		1904	40	4,899	41	188	4,670		6,829	255	1,935	4,230	7,716	3,386	14.3	43.2		
		1899	46			120	4,085		5,976	148	1,588	2,700	5,389	2,689				
	Clinton.....	1909	39	4,357	33	291	4,123	10,882	7,607	276	1,872	4,216	7,645	3,629	18.4	43.7		
		1904	35	3,646	35	129	3,482		5,590	177	1,438	3,406	5,458	2,050	-9.2	8.2		
		1899	22			85	3,836		6,990	115	1,510	2,715	5,043	2,328				

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES:
1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	PER CENT OF INCREASE.			
				Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Value of products.	Wage earners (average number).	Value of products.
	Massachusetts—Con.																	
	Everett.....	1909	62	3,096	56	360	2,680	7,816	\$22,905	\$471	\$1,508	\$4,506	\$8,747	\$4,241	22.6	42.6		
		1904	51	2,451	49	216	2,186		8,477	284	1,155	6,136	3,013	1,963	16.5	38.3		
		1899	52			152	1,877		5,975	168	903	2,474	4,437					
	Fall River.....	1909	288	38,210	247	824	37,139	122,061	82,086	1,514	15,339	35,524	64,146	28,622	38.4	47.6		
		1904	234	27,711	208	667	26,836		69,375	1,142	10,099	26,096	43,473	17,377	-12.4	11.2		
		1899	240			512	30,046		57,415	861	10,742	18,070	39,103	21,033				
	Fitchburg.....	1909	122	9,103	101	505	8,497	28,754	20,888	711	4,231	14,442	23,252	8,810	30.8	51.1		
		1904	107	6,904	111	295	6,498		13,109	379	3,168	9,421	15,391	5,970	4.5	18.3		
		1899	115			290	6,218		12,586	364	2,802	7,480	13,008	5,528				
	Framingham.....	1909	27	2,207	19	219	3,069	4,486	7,770	326	1,446	3,411	6,917	3,506	23.6	65.7		
		1904	36	2,609	36	89	2,484		2,613	133	1,121	4,174	1,057	1,657	12.6	38.8		
		1899	34			69	2,207		2,821	66	857	1,692	3,007	1,315				
	Gardner.....	1909	52	3,849	40	192	3,617	5,031	10,273	300	1,774	2,833	6,485	3,652	14.2	29.2		
		1904	50	3,386	62	156	3,168		8,619	201	1,491	2,570	5,019	2,449	9.4	14.4		
		1899	46			108	2,896		5,888	125	1,199	2,284	4,386	2,102				
	Gloucester.....	1909	102	2,503	104	303	2,181	2,427	5,693	337	1,042	4,770	7,753	2,983	23.7	12.0		
		1904	132	2,141	175	203	1,763		4,321	197	811	4,682	6,921	2,239	-25.5	10.0		
		1899	137			183	2,367		3,865	168	916	4,232	6,293	2,061				
	Greenfield.....	1909	47	1,484	24	209	1,251	2,327	2,520	228	701	1,034	2,801	1,767				
	Haverhill.....	1909	346	12,791	407	695	11,689	7,930	14,786	707	6,658	21,686	35,377	13,691	22.1	44.7		
		1904	320	10,529	404	551	9,574		10,306	542	4,818	14,257	24,447	10,190	-1.9	4.4		
		1899	390			479	9,761		6,358	366	4,538	14,994	23,419	8,425				
	Holyoke.....	1909	187	17,776	153	1,110	16,513	60,269	42,675	1,677	8,076	22,301	40,097	17,796	12.4	30.5		
		1904	179	15,563	158	720	14,085		37,150	1,018	6,693	16,579	30,731	14,152	17.3	27.6		
		1899	168			580	12,519		25,935	810	5,254	12,706	24,093	11,387				
	Hyde Park.....	1909	40	4,649	37	292	4,320	8,856	8,158	377	2,476	3,351	7,336	3,985	8.2	8.9		
		1904	40	4,297	24	282	3,991		7,467	333	2,020	3,581	6,739	3,158	66.7	53.7		
		1899	33			98	2,483		3,554	148	1,122	2,507	4,384	1,877				
	Lawrence.....	1909	162	31,589	145	902	30,542	73,066	79,550	1,581	13,787	45,438	79,993	34,555	39.4	66.5		
		1904	187	22,726	183	633	21,910		69,063	971	8,908	29,416	48,037	18,621	4.8	15.1		
		1899	107			648	20,899		48,827	997	8,197	24,842	41,742	16,900				
	Leominster.....	1909	94	6,000	76	323	5,001	5,800	6,033	442	2,794	5,576	10,531	4,955	35.7	40.4		
		1904	65	4,437	64	246	4,127		4,573	268	1,946	3,964	7,502	3,538	21.0	39.0		
		1899	70			155	3,412		3,862	165	1,481	2,769	5,397	2,628				
	Lowell.....	1909	320	34,108	316	1,217	32,575	72,012	61,984	1,682	14,149	32,831	60,271	27,440	11.2	23.6		
		1904	256	30,544	277	964	29,303		54,809	1,345	11,560	26,911	46,879	19,968	0.2	13.8		
		1899	286			684	29,254		45,510	929	10,853	20,279	41,203	20,924				
	Lynn.....	1909	431	30,685	469	2,848	27,368	17,089	42,784	3,008	15,666	41,361	71,503	30,142	27.1	30.0		
		1904	431	23,811	505	1,706	21,540		23,139	1,530	11,738	32,616	55,003	22,387	31.5	39.8		
		1899	423			1,175	16,377		16,037	954	7,971	24,471	39,347	14,876				
	Malden.....	1909	86	3,259	71	288	2,900	3,433	9,910	330	1,346	4,388	8,206	3,818	-1.8	-27.0		
		1904	59	3,154	65	135	2,954		5,553	133	1,428	4,045	11,236	7,191	22.3	70.2		
		1899	53			104	2,416		5,631	122	1,135	4,084	6,602	2,518				
	Marlborough.....	1909	59	4,585	46	274	4,265	2,721	3,378	289	2,224	6,375	10,382	4,007	22.6	39.0		
		1904	46	3,708	43	186	3,479		2,661	180	1,644	4,586	7,469	2,833	37.8	66.1		
		1899	50			73	2,524		2,001	100	1,152	2,834	4,498	1,664				
	Medford.....	1909	40	673	33	80	560	1,123	1,596	115	331	1,250	2,045	795	15.7	134.5		
		1904	37	572	37	51	434		1,449	67	244	386	872	486	-15.8	-23.0		
		1899	36			58	575		1,051	71	279	540	1,132	592				
	Melrose.....	1909	25	1,141	21	82	1,038	1,535	2,015	86	493	1,589	2,825	1,236	-33.9	-70.1		
		1904	24	1,653	25	57	1,571		4,645	51	796	2,915	9,451	6,536	33.1	176.7		
		1899	16			65	1,180		3,151	77	566	2,146	3,416	1,270				
	Methuen.....	1909	19	1,626	12	42	1,572	5,772	2,956	63	689	2,226	3,476	1,250				
	Milford.....	1909	53	1,980	50	129	1,801	2,410	1,756	205	945	2,389	4,442	2,053	1.1	31.0		
		1904	44	1,930	55	93	1,782		1,683	94	910	1,776	3,390	1,614	31.3	32.8		
		1899	50			75	1,357		1,077	71	633	1,466	2,552	1,086				
	New Bedford.....	1909	207	27,538	303	669	26,566	76,147	58,970	1,245	12,598	28,564	53,238	24,674	48.8	80.7		
		1904	176	18,563	189	319	17,855		40,410	781	7,251	16,091	29,469	13,378	17.0	26.0		
		1899	171			425	15,263		28,152	535	6,123	11,783	23,397	11,614				
	Newburyport.....	1909	74	3,543	71	257	3,215	3,820	4,900	320	1,642	3,781	6,931	3,150	8.8	1.8		
		1904	69	3,261	68	238	2,955		4,020	213	1,392	4,262	2,548	5.5	32.5			
		1899	64			209	2,801		3,696	205	1,175	3,051	5,141	2,090				
	Newton.....	1909	46	2,373	39	160	2,174	4,153	5,669	302	1,125	3,383	6,279	2,896	14.8	51.6		
		1904	48	2,077	45	139	1,893		4,324	201	944	2,242	4,141	1,899	3.8	12.6		
		1899	45			103	1,823		4,321	142	846	1,894	3,679	1,785				
	North Adams.....	1909	60	5,846	62	370	5,414	11,928	15,943	617	2,567	5,576	10,315	4,739	-1.6	28.4		
		1904	58	5,831	66	263	5,502		18,168	373	2,333	4,011	8,036	4,625	-12.8	-25.2		
		1899	68			248	6,312		14,127	461	2,708	5,047	10,741	5,694				
	Northampton.....	1909	71	3,434	58	220	3,150	6,139	7,996	302	1,503	3,163	6,999	3,836	6.3	21.6		
		1904	77	3,235	71	201	2,963		4,380	211	1,217	3,042	5,756	2,714	12.4	22.3		
		1899	66			141	2,635		4,629	150	1,129	2,540	4,707	2,167				

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.									
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earn- ers (average number).	Wage earn- ers (average number).								Wage earn- ers (average number).									
Massachusetts—Con.																								
Peabody.....	1909	74	5,231	55	326	4,850	9,981	\$15,804	\$417	\$2,638	\$10,192	\$15,549	\$5,357	22.7	51.9									
	1904	76	4,227	74	200	3,953	7,654	7,654	260	1,990	6,748	10,237	3,489	48.6	47.4									
	1899	86	.....	.....	146	2,661	4,339	.....	149	1,273	5,074	6,944	1,870	.....	.....							
Pittsfield.....	1909	71	7,414	59	1,002	6,353	8,301	15,080	1,081	3,718	8,528	15,215	6,687	42.6	77.4									
	1904	44	4,781	34	292	4,455	8,035	8,035	459	2,082	4,629	8,577	3,948	39.3	49.1									
	1899	69	.....	.....	205	3,198	5,557	.....	243	1,271	3,078	6,754	2,676	.....	.....							
Plymouth.....	1909	32	3,104	24	168	2,912	6,239	10,760	268	1,416	8,475	11,618	3,143	.....	.....							
Quincy.....	1909	183	6,247	241	514	5,492	9,147	11,975	806	3,434	3,844	10,565	6,661	2.3	17.0									
	1904	161	5,938	222	345	5,371	9,221	9,221	440	3,060	3,704	8,982	5,278	152.4	198.2									
	1899	153	.....	.....	113	2,128	1,886	.....	100	1,145	909	3,012	2,103	.....	.....							
Revere.....	1909	14	125	12	12	101	548	661	11	54	292	407	115	-19.2	14.6									
	1904	12	151	12	14	125	765	765	14	66	249	355	106	43.7	127.6									
	1899	17	.....	.....	8	87	388	.....	8	46	51	156	105	.....	.....							
Salem.....	1909	155	6,852	149	365	6,338	11,436	9,345	396	2,893	8,640	14,576	5,936	6.6	19.5									
	1904	143	6,393	167	281	5,945	9,670	9,670	269	2,506	7,921	12,202	4,281	5.7	13.9									
	1899	162	.....	.....	214	5,625	6,947	.....	202	2,390	6,584	10,711	4,127	.....	.....							
Somerville.....	1909	114	5,951	97	574	5,280	7,680	17,282	692	2,870	31,923	38,687	5,764	52.0	68.5									
	1904	78	3,951	80	397	3,474	10,264	10,264	431	1,753	19,176	22,955	3,779	-1.5	14.4									
	1899	85	.....	.....	224	3,528	5,503	.....	231	1,721	16,721	20,065	3,344	.....	.....							
Southbridge.....	1909	36	4,281	28	216	4,037	7,636	4,266	423	1,805	3,125	6,269	3,144	25.3	49.2									
	1904	32	3,342	28	91	3,223	3,795	3,795	199	1,305	2,260	4,202	1,922	19.9	19.6									
	1899	32	.....	.....	66	2,687	4,144	.....	94	1,123	1,782	3,512	1,730	.....	.....							
Springfield.....	1909	346	14,455	288	2,312	11,855	17,744	28,658	2,362	6,867	14,363	31,773	17,410	12.7	22.9									
	1904	296	11,957	246	1,188	10,523	24,061	24,061	1,499	5,645	12,380	25,860	13,480	29.1	42.4									
	1899	278	.....	.....	849	8,152	16,071	.....	982	3,975	8,892	18,155	9,263	.....	.....							
Taunton.....	1909	146	7,945	110	428	7,407	19,141	16,504	701	3,834	7,775	15,380	7,605	12.1	12.7									
	1904	127	7,020	118	294	6,608	14,790	14,790	468	3,147	7,687	13,645	5,958	0.3	18.2									
	1899	114	.....	.....	313	6,590	11,267	.....	418	3,043	5,540	11,544	6,004	.....	.....							
Wakefield.....	1909	23	2,359	14	115	2,230	1,729	3,864	157	1,046	2,835	5,527	2,692	.....	.....							
Waltham.....	1909	80	6,354	67	250	6,037	7,583	12,871	406	3,288	2,444	7,814	5,370	-2.8	9.3									
	1904	60	6,484	55	221	6,208	10,693	10,693	370	3,240	2,067	7,150	5,083	27.7	21.4									
	1899	74	.....	.....	179	4,861	8,777	.....	255	2,371	1,889	5,890	4,001	.....	.....							
Watertown.....	1909	25	4,805	13	457	4,335	4,862	7,220	440	2,235	6,463	11,546	5,083	.....	.....							
Webster.....	1909	23	3,621	14	198	3,409	7,204	10,479	322	1,476	7,820	11,296	3,476	.....	.....							
Westfield.....	1909	91	3,500	86	354	3,060	3,731	7,500	462	1,695	2,868	7,362	4,494	16.2	24.5									
	1904	86	2,945	78	233	2,634	5,888	5,888	312	1,346	2,251	5,818	3,567	11.1	31.0									
	1899	97	.....	.....	250	2,370	4,157	.....	321	1,077	2,085	4,441	2,356	.....	.....							
Weymouth.....	1909	41	2,238	45	202	1,991	1,902	5,504	240	1,110	4,204	6,627	2,423	8.1	34.6									
	1904	46	2,035	54	140	1,841	3,652	3,652	155	927	2,998	4,922	1,924	-4.2	-8.7									
	1899	51	.....	.....	216	1,922	4,333	.....	286	878	3,178	5,389	2,211	.....	.....							
Winthrop.....	1909	7	19	6	6	7	41	25	3	5	25	42	17	.....	.....							
Woburn.....	1909	59	1,867	65	149	1,653	3,560	8,405	195	932	3,114	5,408	2,294	11.5	16.2									
	1904	52	1,622	59	81	1,482	4,427	4,427	107	783	2,808	4,654	1,846	9.3	16.3									
	1899	47	.....	.....	51	1,356	2,832	.....	63	617	2,879	4,003	1,224	.....	.....							
Worcester.....	1909	580	32,154	750	3,183	28,221	53,405	64,639	4,169	15,295	42,601	77,148	34,547	23.8	47.9									
	1904	470	25,259	420	2,043	22,796	48,772	48,772	2,377	11,826	27,011	52,145	25,134	0.9	11.4									
	1899	465	.....	.....	1,326	22,593	41,384	.....	1,706	11,281	23,470	46,793	23,823	.....	.....							
Michigan:																								
24 cities.....	1909	4,500	184,603	4,038	23,240	157,325	284,118	391,875	26,691	82,674	242,121	469,603	227,482	.....	.....							
18 cities.....	1904	3,136	117,976	3,007	11,619	103,350	188,743	188,743	12,076	48,315	127,052	250,256	123,204	.....	.....							
18 cities.....	1899	2,892	.....	.....	9,050	84,805	144,721	144,721	8,587	34,384	93,116	178,125	85,009	.....	.....							
Adrian.....	1909	80	1,466	66	341	1,059	3,211	5,086	327	540	4,150	6,065	1,935	.....	.....							
Alpena.....	1909	58	1,614	57	125	1,432	10,670	5,798	151	711	2,301	3,964	1,663	15.0	36.5									
	1904	57	1,369	60	64	1,245	2,682	2,682	68	534	1,685	2,905	1,220	3.6	27.8									
	1899	46	.....	.....	54	1,202	.....	.....	46	496	1,276	2,273	997	.....	.....							
Ann Arbor.....	1909	63	783	67	143	573	1,458	1,760	125	287	1,010	1,866	856	4.4	34.6									
	1904	65	690	61	80	549	.....	1,095	62	244	774	1,386	612	-11.9	0.7								
	1899	71	.....	.....	67	623	.....	1,055	49	234	785	1,377	592	.....	.....							
Battle Creek.....	1909	105	5,281	95	1,011	4,175	14,923	19,176	1,256	2,354	7,068	20,174	13,106	23.2	64.0									
	1904	120	4,290	131	770	3,389	.....	13,039	872	1,886	3,984	12,298	8,314	65.2	95.2								
	1899	75	.....	.....	432	2,051	.....	7,212	402	979	2,100	6,301	4,201	.....	.....							
Bay City.....	1909	182	5,357	178	442	4,737	17,872	10,289	467	2,118	5,647	10,294	4,647	6.3	16.9									
	1904	173	4,899	161	282	4,456	.....	5,343	272	2,002	4,948	8,809	3,861	3.4	-2.2								
	1899	177	.....	.....	262	4,309	.....	6,843	243	1,801	5,235	9,011	3,776	.....	.....							
Detroit.....	1909	2,036	95,841	1,804	13,026	81,011	114,190	190,125	15,260	43,007	130,218	252,992	122,774	67.1	97.3									
	1904	1,362	55,718	1,312	5,923	48,483	.....	81,038	6,126	22,558	66,581	128,247	61,666	26.3	45.1								
	1899	1,259	.....	.....	4,947	38,373	.....	67,224	4,726	15,317	47,007	88,366	41,359	.....	.....							
Escanaba.....	1909	39	804	36	48	720	1,416	1,024	62	405	364	1,074	710	.....	.....							

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (average number).								Wage earners (average number).	Value of prod- ucts.
Expressed in thousands.																
Michigan—Contd.																
Flint.....	1909	104	7,840	117	635	7,088	8,240	\$18,085	\$535	\$4,429	\$13,971	\$24,118	\$10,147	228.0	290.4	
	1904	70	2,494	84	249	2,161		4,216	228	1,041	3,769	6,177	2,408	10.3	31.1	
	1899	63			87	1,960		2,507	73	802	2,754	4,713	1,959			
Grand Rapids....	1909	524	20,327	447	2,290	17,590	27,076	38,783	2,943	9,217	19,736	42,231	22,495	13.4	37.6	
	1904	388	17,366	380	1,466	15,514		25,431	1,671	7,318	14,422	30,690	16,268	20.0	38.1	
	1899	382			1,148	12,929		22,692	1,137	5,298	11,121	22,229	11,108			
Holland.....	1909	59	2,183	45	198	1,940	2,956	4,524	262	936	2,584	4,622	2,038			
Ironwood.....	1909	14	229	16	12	201	521	304	14	88	201	377	176			
Ishpeming.....	1909	19	92	19	7	66	73	88	7	37	52	132	80	-9.6	-46.6	
	1904	15	92	11	8	73		199	11	42	142	247	105	-8.8	26.7	
	1899	14			5	80		132	7	44	95	195	100			
Jackson.....	1909	169	5,624	135	692	4,797	6,360	9,078	719	2,492	8,168	14,006	5,838	20.9	67.8	
	1904	147	4,375	132	476	3,967		5,346	427	1,838	4,272	8,348	4,076	6.8	24.4	
	1899	117			374	3,715		4,371	356	1,437	3,808	6,710	2,902			
Kalamazoo.....	1909	193	7,527	152	1,103	6,272	14,449	15,395	1,236	3,149	9,505	17,904	8,399	10.7	36.2	
	1904	157	6,467	133	668	5,666		9,618	691	2,562	6,896	13,142	6,246	46.4	82.9	
	1899	129			485	3,870		5,571	432	1,428	3,893	7,186	3,293			
Lansing.....	1909	169	6,152	142	725	5,285	8,720	13,131	808	2,707	8,802	16,567	7,765	77.2	140.6	
	1904	98	3,405	83	340	2,982		5,999	352	1,389	3,473	6,887	3,414	109.3	134.1	
	1899	74			163	1,425		2,047	135	577	1,632	2,942	1,310			
Manistee.....	1909	64	2,365	78	162	2,125	6,811	3,248	183	1,019	1,289	3,344	2,055	2.0	2.7	
	1904	47	2,238	33	121	2,084		2,832	106	999	1,274	3,257	1,983	-0.9	-10.2	
	1899	56			113	2,103		3,606	111	964	1,376	3,625	2,249			
Marquette.....	1909	34	601	29	74	498	1,500	1,392	82	305	556	1,254	698	-32.5	-47.0	
	1904	31	814	23	53	738		1,663	67	436	1,392	2,364	972	-11.7	49.1	
	1899	29			64	836		1,177	76	355	813	1,585	772			
Menominee.....	1909	52	1,930	41	189	1,700	4,770	5,213	205	718	1,657	3,728	2,071	14.2	25.4	
	1904	45	1,630	35	106	1,489		3,340	120	705	1,373	2,974	1,601	-12.6	-27.0	
	1899	38			88	1,703		3,788	129	769	1,837	4,076	2,239			
Muskegon.....	1909	101	5,098	89	487	4,522	10,436	8,337	445	2,107	4,938	9,648	4,710	46.9	52.7	
	1904	70	3,371	70	223	3,078		4,790	257	1,211	3,526	6,319	2,793		39.6	
	1899	67			164	3,078		3,637	154	1,125	2,269	4,528	2,259			
Pontiac.....	1909	42	2,009	27	243	1,739	2,854	3,826	221	1,087	3,240	5,894	2,654			
Port Huron.....	1909	82	1,862	75	207	1,680	3,130	3,889	201	791	1,949	3,588	1,639	-26.0	-3.4	
	1904	74	2,356	69	151	2,136		3,205	155	1,107	1,747	3,715	1,968	5.4	2.4	
	1899	78			216	2,026		3,149	138	933	1,752	3,627	1,875			
Saginaw.....	1909	203	7,090	232	868	5,990	14,412	26,703	926	3,184	10,409	18,833	8,424	34.8	86.9	
	1904	179	5,205	191	569	4,445		7,273	502	1,981	5,367	10,079	4,712	5.7	16.5	
	1899	184			357	4,205		7,041	355	1,672	5,084	8,653	3,569			
Sault Ste. Marie..	1909	47	1,125	37	83	1,005	3,239	4,663	117	542	3,123	4,619	1,496	12.3	91.5	
	1904	38	997	32	70	895		1,634	89	462	1,427	2,412	985	182.3	231.3	
	1899	33			24	317		313	18	153	279	728	449			
Traverse City.....	1909	61	1,403	54	129	1,220	4,231	1,958	139	444	1,183	2,289	1,106			
Minnesota:																
8 cities.....	1909	2,305	69,872	2,174	10,973	56,725	150,973	184,302	12,175	32,398	172,347	262,001	89,654			
6 cities.....	1904	1,829	52,110	1,750	6,707	43,653		123,212	6,802	22,466	122,291	183,677	61,386			
6 cities.....	1899	1,603			4,800	39,611		90,365	4,539	17,848	94,887	141,976	47,089			
Duluth.....	1909	194	6,916	155	678	6,083	17,561	17,709	910	3,593	8,844	17,180	8,336	52.6	69.4	
	1904	163	4,645	155	503	3,987		9,538	504	2,186	4,634	10,139	5,505	9.0	29.8	
	1899	126			220	3,658		5,967	212	1,779	3,669	7,811	4,152			
Mankato.....	1909	63	1,033	69	157	807	3,654	2,217	162	346	2,728	3,723	995	11.5	8.8	
	1904	54	906	67	115	724		2,223	102	303	2,529	3,422	893	39.2	81.3	
	1899	47			81	520		1,077	71	176	1,355	1,887	532			
Minneapolis.....	1909	1,102	33,923	1,012	5,949	26,962	89,247	90,382	6,277	15,638	119,993	165,405	45,412	24.4	36.5	
	1904	876	26,045	847	3,527	21,671		66,135	3,536	11,418	88,882	121,163	32,281	10.5	28.3	
	1899	789			2,158	19,620		50,177	2,113	9,383	68,910	94,408	25,498			
St. Cloud.....	1909	69	812	102	84	626	3,362	1,607	98	355	1,342	2,299	957			
St. Paul.....	1909	719	23,530	649	3,542	19,339	26,204	60,467	4,048	10,952	30,300	58,990	28,690	34.6	53.9	
	1904	614	17,037	566	2,108	14,363		36,401	2,202	7,211	19,488	38,319	18,831	10.3	27.5	
	1899	537			2,079	13,019		25,659	1,875	5,324	15,912	30,056	14,144			
Stillwater.....	1909	38	940	83	169	688	1,952	3,277	222	359	1,648	2,686	1,038	-28.0	-3.5	
	1904	36	1,196	38	203	955		2,828	176	454	1,494	2,784	1,300	15.2	54.6	
	1899	32			76	829		2,172	85	358	1,050	1,801	751			
Virginia.....	1909	21	229	19	22	188	365	766	45	131	162	519	357			
Winona.....	1909	99	2,489	85	372	2,032	8,628	7,878	413	1,024	7,330	11,199	3,869	4.0	42.7	
	1904	86	2,281	77	251	1,953		6,087	282	894	5,274	7,850	2,576	-0.6	30.6	
	1899	72			186	1,965		5,313	183	828	4,001	6,013	2,012			

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen-sus.	Num-ber of estab-lish-ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Sala-ries.	Wages.	Cost of materials.	Value of products.	Value added by manu-facture (value of products less cost of materials).	PER CENT OF INCREASE.				
			Total.	Pro-pri-eters and firm mem-bers.	Salaried em-ployees.	Wage earners (average number).								Wage earners (average num-ber).	Value of products.	Value added by manu-facture (value of products less cost of materials).	Wage earners (average num-ber).	Value of products.
Mississippi:																		
5 cities.....	1909	202	5,383	168	614	4,601	14,509	\$9,107	\$630	\$2,182	\$6,904	\$11,945	\$5,041	.....	.....	
3 cities.....	1904	109	3,052	98	261	2,693	.....	4,403	258	1,246	3,548	5,975	2,427	.....	.....	
3 cities.....	1899	82	.....	.....	151	2,469	.....	3,790	151	922	2,412	4,407	1,995	.....	.....	
Hattiesburg.....	1909	29	742	22	72	648	2,273	1,341	70	297	625	1,251	626	.....	.....	
Jackson.....	1909	45	965	36	130	799	3,417	1,783	146	377	1,968	3,113	1,145	.....	.....	
Meridian.....	1909	54	1,790	45	230	1,524	5,361	3,816	220	702	2,474	4,238	1,764	13.2	20.7			
	1904	53	1,529	55	128	1,346	.....	2,516	126	588	2,052	3,267	1,215	61.4	69.8		
	1899	42	.....	.....	58	834	.....	1,402	62	327	1,115	1,924	809	.....	.....	
Natchez.....	1909	27	613	17	68	428	1,481	931	69	169	689	1,114	425	35.4	35.9			
	1904	24	375	16	44	316	.....	632	42	134	503	820	317	-51.2	-26.5		
	1899	16	.....	.....	38	648	.....	1,243	34	174	881	1,115	534	.....	.....	
Vicksburg.....	1909	47	1,364	48	114	1,202	2,037	1,236	125	637	1,148	2,229	1,081	16.6	18.1			
	1904	32	1,148	28	89	1,031	.....	1,255	90	524	993	1,888	895	4.5	28.0		
	1899	24	.....	.....	55	987	.....	1,145	55	421	716	1,268	652	.....	.....	
Missouri:																		
10 cities.....	1909	4,247	140,091	3,206	20,635	116,250	222,230	342,373	25,205	64,327	245,399	427,078	190,679	.....	.....	
7 cities.....	1904	3,559	121,393	2,828	14,542	104,023	.....	317,403	16,656	53,476	172,418	326,009	155,591	.....	.....	
7 cities.....	1899	3,662	.....	.....	10,852	84,165	.....	187,638	11,996	37,879	127,268	238,424	111,156	.....	.....	
Hannibal.....	1909	66	2,688	65	178	2,445	3,412	2,498	176	1,284	4,316	6,195	1,879	35.0	73.8			
	1904	58	1,957	49	97	1,811	.....	1,848	91	825	2,156	3,564	1,496	46.3	22.0		
	1899	66	.....	.....	121	1,238	.....	1,754	109	535	1,735	2,699	964	.....	.....	
Jefferson City.....	1909	35	1,572	19	217	1,336	1,166	3,079	257	391	3,652	5,446	1,794	.....	.....	
Joplin.....	1909	77	1,099	73	186	830	3,102	2,992	184	494	2,358	4,136	1,778	22.1	37.6			
	1904	56	835	55	100	680	.....	2,524	119	386	1,960	3,006	1,046	-0.3	29.3		
	1899	45	.....	.....	50	682	.....	1,268	53	380	1,556	2,325	769	.....	.....	
Kansas City.....	1909	902	18,651	757	3,251	14,643	36,064	42,729	3,478	8,526	30,962	54,794	23,742	32.6	53.5			
	1904	612	13,559	519	2,001	11,039	.....	32,127	2,120	5,920	19,525	35,573	16,048	13.8	58.8		
	1899	585	.....	.....	1,183	9,699	.....	22,992	1,164	4,569	12,531	23,588	11,667	.....	.....	
Moberly.....	1909	31	1,155	29	127	999	1,276	1,320	120	538	1,092	1,984	892	.....	.....	
St. Joseph.....	1909	261	6,514	213	911	5,390	7,737	12,038	873	2,710	11,063	17,626	6,573	15.8	52.3			
	1904	219	5,552	211	678	4,663	.....	9,734	579	2,072	6,820	11,574	4,754	-8.5	1.9		
	1899	184	.....	.....	457	5,095	.....	8,016	449	1,998	6,942	11,363	4,420	.....	.....	
St. Louis.....	1909	2,667	104,587	1,869	15,347	87,371	163,615	269,392	19,671	48,535	188,159	328,495	140,306	5.8	22.9			
	1904	2,482	95,962	1,883	11,381	82,698	.....	265,937	13,475	42,642	137,740	267,307	129,567	27.6	38.0		
	1899	2,646	.....	.....	8,867	64,532	.....	150,526	10,079	29,145	101,838	193,733	91,965	.....	.....	
Sedalia.....	1909	75	1,150	66	149	935	1,662	2,346	145	461	1,216	2,333	1,117	-4.0	37.9			
	1904	50	1,097	42	81	974	.....	1,907	80	503	825	967	608	7.2	31.9		
	1899	57	.....	.....	66	909	.....	1,152	53	299	675	1,283	.....	.....	.....
Springfield.....	1909	108	2,473	91	251	2,131	3,685	5,517	283	1,280	3,048	5,382	2,334	-1.3	1.7			
	1904	82	2,431	69	204	2,158	.....	3,926	192	1,128	3,362	5,293	1,901	26.2	54.1		
	1899	79	.....	.....	108	1,710	.....	1,930	89	853	1,991	2,434	1,445	.....	.....	
Webb City.....	1909	25	212	24	18	170	511	462	18	108	513	777	264	.....	.....	
Montana: ¹																		
5 cities.....	1909	186	2,391	153	405	1,833	3,518	6,233	531	1,777	2,737	6,772	4,685	.....	.....	
2 cities.....	1904	88	1,054	76	151	827	.....	2,379	236	769	996	2,223	1,927	.....	.....	
2 cities.....	1899	83	.....	.....	108	675	.....	1,947	128	568	1,114	2,293	1,179	.....	.....	
Anaconda.....	1909	13	151	10	44	97	258	489	77	134	157	591	494	.....	.....	
Billings.....	1909	37	294	32	36	226	661	951	52	229	765	1,243	478	.....	.....	
Butte.....	1909	66	867	58	147	682	1,217	1,899	200	649	920	2,464	1,544	38.5	40.0			
	1904	54	614	47	89	478	.....	1,267	150	508	568	1,760	1,162	16.3	16.0		
	1899	56	.....	.....	58	411	.....	1,130	66	396	778	1,517	739	.....	.....	
Helena.....	1909	44	550	33	97	420	788	1,981	121	262	493	1,393	810	20.3	12.0			
	1904	34	440	29	62	349	.....	1,112	86	260	428	1,163	735	32.2	49.9		
	1899	27	.....	.....	50	264	.....	817	62	172	336	776	440	.....	.....	
Missoula.....	1909	26	529	20	81	428	594	913	81	403	402	1,171	769	.....	.....	
Nebraska:																		
4 cities.....	1909	714	21,429	567	3,777	17,085	31,052	74,142	4,261	9,817	125,963	162,137	36,174	.....	.....	
3 cities.....	1904	487	15,754	431	2,222	13,101	.....	59,543	2,403	7,267	104,777	136,641	21,864	.....	.....	
3 cities.....	1899	429	.....	.....	1,736	12,707	.....	51,587	1,667	6,199	82,542	110,347	27,865	.....	.....	
Grand Island.....	1909	44	749	41	92	616	950	1,697	97	280	1,611	1,837	825	.....	.....	
Lincoln.....	1909	167	2,836	134	562	2,140	2,206	7,107	534	1,656	3,864	7,019	3,149	32.3	34.2			
	1904	123	2,119	121	381	1,617	.....	4,421	373	853	2,691	5,222	2,531	46.5	58.9		
	1899	81	.....	.....	176	1,104	.....	2,249	165	481	1,396	2,764	1,168	.....	.....	
Omaha.....	1909	432	10,185	329	1,833	8,023	16,037	45,461	2,071	4,837	43,415	60,834	17,439	37.8	12.7			
	1904	318	7,064	276	966	5,822	.....	34,558	1,060	3,204	42,693	54,004	11,111	10.3	41.3		
	1899	307	.....	.....	791	5,276	.....	32,956	766	2,603	19,926	28,674	18,146	.....	.....	
South Omaha.....	1909	71	7,659	63	1,290	6,306	11,859	19,577	1,559	3,544	77,673	92,436	14,763	11.4	37.1			
	1904	41	6,571	34	875	5,662	.....	20,564	950	3,210	59,193	67,415	8,222	-19.5	-2.9		
	1899	41	.....	.....	769	6,327	.....	16,382	736	3,115	61,618	69,509	8,491	.....	.....	

¹ Does not include statistics for Great Falls.

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.				
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).	Value of products.	Wage earners (average number).	Value of products.
Expressed in thousands.																		
Nevada:																		
1 city	1909	40	419	25	84	310	1,746	\$1,872	\$121	\$308	\$1,171	\$1,862	\$691	.....			
Reno.....	1909	40	419	25	84	310	1,746	1,872	121	308	1,171	1,862	691	.....			
New Hampshire:																		
8 cities.....	1909	604	47,009	539	2,003	44,457	130,877	73,370	2,295	20,016	56,523	93,054	36,531	.....			
5 cities.....	1904	382	31,502	356	1,257	29,589	.....	50,774	1,403	12,842	34,779	57,574	22,595	.....			
5 cities.....	1899	402	.....	.....	826	30,191	.....	45,401	1,016	11,981	27,165	48,336	21,171	.....			
Berlin.....	1909	20	1,906	18	98	1,790	25,537	13,059	166	879	3,654	5,897	2,243	.....			
Concord.....	1909	111	3,059	110	256	2,693	6,381	5,574	264	1,641	3,546	6,477	2,931	1.5				
	1904	80	2,949	79	216	2,054	.....	5,701	238	1,436	2,831	5,374	2,543	9.1			
	1899	86	.....	.....	146	2,432	.....	4,254	135	1,300	2,088	4,211	2,123	.....			
Dover.....	1909	51	3,227	49	148	3,030	10,395	6,398	183	1,486	3,236	6,370	3,134	6.0				
	1904	42	3,034	43	132	2,859	.....	7,789	182	1,227	3,870	6,043	2,173	2.2			
	1899	40	.....	.....	99	2,797	.....	6,408	139	1,229	3,273	5,440	2,167	.....			
Keene.....	1909	64	1,993	47	177	1,769	5,158	2,959	165	973	1,837	3,483	1,646	.....			
Laconia.....	1909	43	2,252	39	67	2,146	2,203	3,168	88	981	2,013	3,818	1,805	.....			
Manchester.....	1909	175	25,718	156	827	24,735	61,796	26,221	880	10,444	30,497	46,812	16,315	40.7				
	1904	155	18,327	142	606	17,579	.....	25,248	681	7,323	18,707	30,697	11,990	-1.6			
	1899	166	.....	.....	308	17,862	.....	21,540	441	6,468	13,803	24,628	10,825	.....			
Nashua.....	1909	104	7,757	92	353	7,312	17,567	12,854	441	3,112	10,379	17,326	6,947	18.7				
	1904	78	6,462	68	235	6,159	.....	9,405	266	2,508	8,483	12,858	4,375	6.6			
	1899	72	.....	.....	179	5,777	.....	9,287	189	2,327	6,126	10,096	3,970	.....			
Portsmouth.....	1909	36	1,097	28	77	992	1,840	3,137	108	500	1,361	2,871	1,510	55.5				
	1904	27	730	24	68	638	.....	2,631	96	348	888	2,602	1,714	-51.8			
	1899	38	.....	.....	94	1,323	.....	3,912	112	657	1,875	3,961	2,086	.....			
New Jersey:																		
32 cities.....	1909	5,939	283,129	5,492	28,872	248,765	383,358	699,760	37,717	129,477	525,860	851,499	325,639	.....			
24 cities.....	1904	4,621	219,514	4,448	17,476	197,590	.....	519,958	21,703	96,254	336,856	566,942	230,086	.....			
24 cities.....	1899	4,253	.....	.....	11,624	160,842	.....	376,720	14,682	73,339	253,777	419,802	166,025	.....			
Asbury Park.....	1909	27	332	28	40	264	392	537	30	175	294	602	308	.....			
Atlantic City.....	1909	94	973	94	153	726	1,718	4,242	110	480	1,136	2,260	1,124	90.6				
	1904	62	512	64	67	381	.....	1,919	53	223	365	975	610	24.9			
	1899	36	.....	.....	32	305	.....	1,332	20	165	281	608	327	.....			
Bayonne.....	1909	97	8,790	84	1,187	7,519	28,094	62,281	1,762	4,775	58,932	73,641	14,709	6.5				
	1904	58	7,851	48	746	7,057	.....	50,297	1,037	4,277	46,984	60,634	13,650	51.1			
	1899	63	.....	.....	248	4,670	.....	26,251	413	2,623	33,794	38,601	4,807	.....			
Bloomfield.....	1909	45	3,435	35	443	2,957	6,031	7,769	591	1,301	2,301	5,895	3,594	.....			
Bridgeton.....	1909	74	2,649	62	200	2,387	2,105	3,302	207	1,163	1,997	4,070	2,073	4.9				
	1904	61	2,492	54	162	2,276	.....	2,147	128	1,014	1,239	2,964	1,725	4.3			
	1899	62	.....	.....	115	2,182	.....	2,155	108	749	1,043	2,259	1,216	.....			
Camden.....	1909	365	18,709	315	1,867	16,527	29,056	49,158	2,406	8,607	27,384	49,138	21,754	30.5				
	1904	298	14,127	285	1,201	12,661	.....	31,992	1,496	6,098	20,423	33,587	13,164	63.5			
	1899	322	.....	.....	658	7,742	.....	15,593	682	3,217	10,442	17,970	7,528	.....			
East Orange.....	1909	42	1,861	45	430	1,386	1,087	3,849	264	858	1,768	3,725	1,957	62.3				
	1904	17	1,251	14	383	854	.....	3,048	267	454	1,108	2,327	1,219	23.8			
	1899	22	.....	.....	150	690	.....	1,896	186	356	911	2,087	1,176	.....			
Elizabeth.....	1909	163	13,670	132	801	12,737	20,124	26,774	1,052	7,513	16,429	29,147	12,718	3.3				
	1904	124	13,175	100	740	12,335	.....	23,564	866	7,398	16,981	29,301	12,320	29.9			
	1899	141	.....	.....	584	9,498	.....	15,951	801	5,476	12,913	22,861	9,948	.....			
Garfield.....	1909	25	2,661	20	111	2,530	5,416	8,006	205	1,080	5,975	8,894	2,919	.....			
Hackensack.....	1909	46	873	44	91	738	1,021	1,846	119	360	899	1,978	1,079	.....			
Harrison.....	1909	54	7,339	33	806	6,500	8,021	20,602	925	3,672	5,413	13,142	7,729	60.9				
	1904	41	4,472	19	413	4,040	.....	11,388	524	1,929	3,629	8,409	4,780	41.3			
	1899	41	.....	.....	202	2,859	.....	5,076	234	1,381	3,202	6,087	2,885	.....			
Hoboken.....	1909	244	9,339	206	1,033	8,109	11,108	19,898	1,365	4,553	9,469	26,413	10,944	12.1				
	1904	279	8,230	278	725	7,227	.....	11,777	914	3,573	6,580	14,077	7,497	26.5			
	1899	194	.....	.....	402	5,712	.....	7,475	495	2,625	5,026	10,483	5,457	.....			
Irvington.....	1909	51	656	40	76	540	967	1,406	103	278	2,343	3,018	675	.....			
Jersey City.....	1909	745	30,239	614	4,171	25,454	35,017	79,794	5,049	13,216	89,317	128,775	39,458	25.1				
	1904	628	23,312	580	2,379	20,353	.....	82,395	2,990	10,021	48,799	75,741	26,942	17.0			
	1899	536	.....	.....	1,614	17,391	.....	78,612	2,039	7,965	50,266	72,930	22,664	.....			
Kearny.....	1909	18	3,111	14	277	2,820	5,879	6,551	269	1,540	5,263	8,306	3,043	116.4				
	1904	11	1,262	15	44	1,303	.....	2,925	63	505	3,505	4,428	923	32.2			
	1899	16	.....	.....	28	986	.....	1,983	43	359	984	1,607	623	.....			
Long Branch.....	1909	34	562	36	111	415	922	2,362	75	225	584	1,117	533	.....			
Millville.....	1909	39	3,144	37	346	2,761	3,681	3,578	368	1,424	1,599	4,182	2,583	-0.2				
	1904	35	3,022	26	229	2,767	.....	3,810	236	1,528	1,384	3,719	2,335	23.6			
	1899	18	.....	.....	152	2,239	.....	3,169	160	1,098	919	2,514	1,595	.....			

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES:
1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.		PERSONS ENGAGED IN INDUSTRY.						Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	PER CENT OF INCREASE.		
STATE AND CITY.	Cen-sus.	Number of estab-lish-ments.	Total.	Pro-priet-ors and firm mem-bers.	Salaried em-ployees.	Wage earners (average number).	Wage earners (average number).								Value of products.	Value added by manufacture (value of products less cost of materials).	Wage earners (average number).	Value of products.
															Expressed in thousands.		
New Jersey—Contd.																	
Montclair.....	1909	23	321	17	52	252	1,245	\$1,105	\$44	\$139	\$669	\$1,025	\$357	68.9	65.2		
	1904	19	188	17	20	151		566	24	72	419	621	202	-10.7	-6.5		
	1899	23			12	169		505	14	66	366	664	278				
Morristown.....	1909	31	278	32	45	201	766	948	39	130	369	724	355	-34.5	2.7		
	1904	26	359	27	25	307		782	22	171	299	705	406	21.8	18.3		
	1899	22			36	252		747	24	146	310	596	286				
New Brunswick...	1909	93	5,948	72	612	5,244	6,337	11,189	780	2,020	4,549	10,005	5,458	14.7	12.2		
	1904	71	4,991	63	338	4,590		10,393	400	1,792	4,158	8,917	4,759	19.7	54.0		
	1899	72			238	3,836		6,319	303	1,304	2,994	5,791	2,797				
Newark.....	1909	1,858	69,986	1,704	8,327	59,955	78,263	154,233	11,777	33,076	114,679	202,511	87,832	18.3	35.0		
	1904	1,600	57,463	1,631	5,135	50,697		119,026	6,685	25,622	80,689	150,055	69,366	18.2	33.1		
	1899	1,573			4,146	42,878		97,182	5,256	20,365	60,772	112,728	61,956				
Orange.....	1909	85	5,054	65	606	4,383	5,962	11,148	772	2,403	3,688	9,176	5,488	78.9	49.2		
	1904	66	2,687	80	157	2,450		3,441	192	1,312	2,642	6,151	3,509	49.4	105.3		
	1899	74			50	1,640		1,860	48	912	1,580	2,996	1,416				
Passaic.....	1909	169	16,386	145	1,155	15,086	23,245	42,841	1,784	6,269	24,335	41,729	17,394	37.1	83.2		
	1904	95	11,864	78	776	11,000		28,611	1,073	3,866	13,110	22,783	9,673	71.9	77.9		
	1899	70			403	6,399		18,377	623	2,374	7,418	12,905	5,387				
Paterson.....	1909	702	35,116	871	2,241	32,004	35,889	66,402	2,981	15,205	34,728	69,584	24,856	12.3	27.3		
	1904	513	30,875	507	1,859	28,509		53,696	2,164	13,002	27,441	54,673	27,222	-0.1	12.7		
	1899	487			1,199	28,542		46,894	1,588	11,843	25,055	48,502	23,447				
Perth Amboy.....	1909	80	6,595	55	674	5,866	22,314	25,100	986	2,679	63,932	73,093	9,161	48.5	110.0		
	1904	53	4,333	37	346	3,950		11,583	400	1,827	30,316	34,800	4,484	97.0	147.5		
	1899	47			157	2,005		6,374	185	920	11,347	14,061	2,714				
Phillipsburg.....	1909	39	3,753	27	294	3,432	7,061	9,764	362	1,732	4,770	9,150	4,380	9.0	36.9		
	1904	32	3,279	21	110	3,148		6,723	179	1,472	3,566	6,684	3,118	42.1	45.8		
	1899	34			74	2,216		3,308	104	887	2,803	4,685	1,782				
Plainfield.....	1909	60	2,027	55	214	1,758	3,912	6,508	281	968	1,530	3,649	2,649	-11.5	2.2		
	1904	49	2,283	51	246	1,986		5,101	238	1,026	1,154	3,572	2,418	43.5	48.6		
	1899	32			121	1,384		2,450	139	761	813	2,437	1,624				
Trenton.....	1909	340	20,679	295	1,841	18,543	29,839	46,639	2,232	9,726	27,673	49,009	21,336	31.2	51.4		
	1904	311	15,435	293	1,012	14,130		40,861	1,311	6,921	17,551	32,360	14,809	7.0	13.7		
	1899	246			739	13,138		24,625	903	6,003	16,581	28,458	11,877				
Union.....	1909	83	3,155	83	178	2,894	3,034	10,910	230	1,411	3,539	7,941	4,402	55.9	126.1		
	1904	77	2,038	78	104	1,856		7,295	183	875	1,362	3,512	2,120	34.9	3.2		
	1899	57			92	1,376		5,354	164	665	1,408	3,403	1,995				
West Hoboken...	1909	137	3,179	154	243	2,782	1,477	4,661	268	1,425	2,488	5,577	3,089	-21.9	-6.2		
	1904	95	3,923	102	259	3,562		6,018	238	1,276	3,122	5,947	2,825	30.3	24.7		
	1899	65			172	2,733		3,732	152	1,059	2,529	4,769	2,240				
West New York...	1909	66	1,779	70	201	1,508	1,443	4,163	237	729	7,409	9,274	1,865				
West Orange.....	1909	10	530	8	46	476	1,032	1,994	44	285	399	748	349				
New Mexico:																	
1 city.....	1909	31	686	32	67	587	1,626	847	71	489	584	1,288	704				
Albuquerque.....	1909	31	686	32	67	587	1,626	847	71	489	584	1,288	704				
New York:																	
50 cities.....	1909	34,436	1,030,352	36,685	136,792	856,675	1,071,926	2,244,069	158,438	482,713	1,586,988	2,925,072	1,338,084				
39 cities.....	1904	27,967	829,728	31,911	87,274	710,543		1,623,770	98,689	363,107	1,140,289	2,130,276	989,887				
39 cities.....	1899	26,467			60,334	605,358		1,260,194	68,879	287,489	870,223	1,613,790	743,567				
Albany.....	1909	395	11,607	410	1,336	9,861	15,629	26,276	1,581	5,234	10,521	22,826	12,305	-9.9	12.9		
	1904	490	10,685	550	1,159	8,976		16,676	1,377	4,269	9,377	20,209	10,832	10.7	17.0		
	1899	511			761	8,106		18,011	914	3,852	7,507	17,269	9,762				
Amsterdam.....	1909	97	10,776	103	399	10,284	11,745	18,162	545	4,823	13,195	22,449	9,254	28.7	49.6		
	1904	89	8,504	95	416	7,993		14,554	404	3,179	8,853	15,007	6,154	27.7	41.0		
	1899	98			188	6,261		9,461	218	2,457	5,990	10,643	4,653				
Auburn.....	1909	140	7,484	130	857	6,497	15,455	23,743	701	3,157	8,937	15,961	7,024	-2.4	18.9		
	1904	111	7,275	120	495	6,660		18,178	455	2,867	8,245	13,421	5,176	13.0	40.2		
	1899	120			311	5,895		12,427	322	2,452	5,212	9,575	4,363				
Batavia.....	1909	59	2,346	51	288	2,007	3,204	5,697	349	960	1,781	4,401	2,620				
Binghamton.....	1909	266	7,997	239	935	6,823	7,742	14,214	1,062	3,084	8,726	17,114	8,388	21.1	23.1		
	1904	241	6,514	247	631	5,636		11,827	589	2,425	6,421	13,997	7,486	12.5	32.0		
	1899	219			465	5,011		8,654	460	1,891	5,362	10,529	5,177				
Buffalo.....	1909	1,753	61,246	1,489	8,345	51,412	121,791	193,041	9,347	28,727	136,538	218,504	82,266	18.0	48.5		
	1904	1,538	50,390	1,559	5,264	43,567		137,023	5,542	21,622	88,367	147,378	59,011	27.1	39.5		
	1899	1,478			3,767	34,275		95,740	3,429	15,678	65,939	105,627	39,688				
Cohoes.....	1909	103	8,596	84	303	8,209	14,291	13,117	439	3,387	8,176	14,831	6,655	18.8	44.1		
	1904	98	7,276	93	273	6,910		10,063	304	2,707	6,284	10,280	4,006	-16.5	-6.7		
	1899	112			201	8,273		11,136	251	2,971	5,908	11,031	5,123				
Corning.....	1909	45	2,289	48	167	2,074	1,486	3,216	191	1,038	864	3,050	2,188	-11.9	-1.1		
	1904	57	2,583	58	170	2,355		2,658	194	1,148	1,075	3,084	2,009	47.2	35.7		
	1899	49			113	1,600		1,818	139	740	920	2,272	1,353				

1 Does not include statistics for Lackawanna.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Expressed in thousands.															
New York—Contd.															
Cortland.....	1909	51	2,622	46	220	2,356	6,661	\$5,460	\$284	\$1,302	\$3,574	\$6,395	\$2,821	-----	-----
Dunkirk.....	1909	57	3,301	43	502	2,756	5,194	7,079	549	1,414	3,208	6,576	3,368	-18.8	-33.6
	1904	38	3,656	34	227	3,395	-----	5,771	260	2,003	4,749	9,909	5,160	34.0	89.6
	1899	41	-----	-----	116	2,533	-----	4,134	118	1,336	3,015	5,226	2,211	-----	-----
Elmira.....	1909	154	4,425	136	642	3,647	6,672	10,830	735	1,882	3,690	8,067	4,477	13.7	27.9
	1904	142	3,714	126	380	3,298	-----	6,237	366	1,465	3,001	6,308	3,307	-10.1	-4.4
	1899	144	-----	-----	271	3,670	-----	5,991	242	1,491	3,902	6,597	2,695	-----	-----
Fulton.....	1909	45	3,014	34	181	2,799	17,963	11,033	250	1,298	4,857	7,867	3,010	-----	-----
Geneva.....	1909	56	1,824	42	255	1,525	2,705	4,104	307	792	2,991	5,154	2,163	-3.4	4.1
	1904	54	1,812	44	188	1,580	-----	6,441	217	805	2,996	4,952	1,958	33.9	82.3
	1899	49	-----	-----	126	1,180	-----	2,280	150	505	1,650	2,716	1,066	-----	-----
Glens Falls.....	1909	68	3,048	69	205	2,774	6,772	6,226	289	1,223	2,309	4,877	2,568	35.2	72.6
	1904	49	2,235	57	126	2,052	-----	3,290	164	721	1,292	2,825	1,533	-33.8	-29.3
	1899	57	-----	-----	162	3,101	-----	4,055	156	950	1,859	3,994	2,135	-----	-----
Gloversville.....	1909	187	6,604	221	642	5,741	6,163	11,969	682	2,791	8,062	14,171	6,109	13.7	51.7
	1904	180	6,603	248	307	5,045	-----	8,027	290	2,031	5,252	9,341	4,089	-35.4	3.0
	1899	183	-----	-----	241	7,813	-----	5,567	239	2,395	5,254	9,070	3,816	-----	-----
Hornell.....	1909	45	2,459	40	236	2,183	3,349	2,866	239	1,048	1,878	3,648	1,770	-0.8	15.3
	1904	45	2,385	44	141	2,200	-----	2,116	135	974	1,464	3,163	1,699	42.0	30.1
	1899	48	-----	-----	110	1,549	-----	1,767	93	590	1,308	2,431	1,123	-----	-----
Hudson.....	1909	45	1,451	37	112	1,302	1,515	2,774	127	576	2,063	3,506	1,443	-----	-----
Ithaca.....	1909	81	1,105	72	160	873	3,045	2,978	144	439	840	1,920	1,080	-----	-7.7
	1904	67	1,120	70	177	873	-----	2,771	191	424	819	2,080	1,261	1.4	38.6
	1899	62	-----	-----	97	861	-----	2,523	78	426	656	1,501	845	-----	-----
Jamestown.....	1909	156	7,753	142	822	6,789	11,679	16,075	995	3,305	7,384	14,720	7,336	29.6	42.2
	1904	149	5,978	170	571	5,237	-----	10,200	693	2,235	4,251	10,350	6,099	15.7	33.9
	1899	108	-----	-----	378	4,523	-----	8,364	470	1,718	3,794	7,731	3,937	-----	-----
Johnstown.....	1909	138	3,009	198	222	2,589	3,410	5,204	176	1,175	3,925	6,574	2,649	6.7	44.7
	1904	100	2,745	151	168	2,426	-----	3,680	140	943	2,561	4,543	1,982	-34.3	-11.3
	1899	115	-----	-----	127	3,695	-----	3,589	118	1,153	2,985	5,123	2,135	-----	-----
Kingston.....	1909	99	3,845	93	471	3,281	4,648	5,924	411	1,366	2,582	5,986	3,404	24.5	24.4
	1904	96	2,981	94	251	2,636	-----	7,119	237	1,096	2,112	4,812	2,700	29.1	21.8
	1899	109	-----	-----	150	2,042	-----	3,211	148	925	1,903	3,952	2,049	-----	-----
Little Falls.....	1909	55	4,408	58	139	4,211	7,742	6,990	232	1,965	4,923	8,460	3,537	60.7	89.2
	1904	49	2,801	56	124	2,621	-----	4,514	144	1,034	2,535	4,471	1,935	-12.0	9.8
	1899	52	-----	-----	106	2,980	-----	3,953	120	1,049	2,233	4,071	1,838	-----	-----
Lockport.....	1909	109	2,574	90	346	2,138	14,335	10,227	425	1,130	5,350	8,168	2,818	-8.0	40.6
	1904	109	2,636	103	210	2,323	-----	6,123	255	1,110	3,316	5,808	2,492	-1.5	8.5
	1899	124	-----	-----	224	2,359	-----	5,972	231	1,078	3,097	5,353	2,256	-----	-----
Middletown.....	1909	59	1,970	62	175	1,733	2,548	3,695	181	902	2,905	4,658	1,753	8.6	38.8
	1904	50	1,762	58	108	1,596	-----	2,298	104	740	1,956	3,356	1,400	14.3	55.7
	1899	51	-----	-----	58	1,396	-----	1,931	59	574	1,325	2,155	830	-----	-----
Mount Vernon.....	1909	90	1,492	76	209	1,207	1,590	3,202	209	802	1,286	3,376	2,090	80.1	79.9
	1904	54	904	51	183	670	-----	7,284	150	426	785	1,877	1,092	53.0	106.3
	1899	37	-----	-----	93	438	-----	4,057	78	224	328	910	532	-----	-----
Newburgh.....	1909	104	4,966	96	526	4,344	4,902	8,920	667	2,180	4,843	9,923	5,085	8.2	41.1
	1904	79	4,620	80	527	4,013	-----	6,508	479	1,789	3,276	7,036	3,760	30.5	31.3
	1899	93	-----	-----	281	3,074	-----	4,519	264	1,316	2,648	5,358	2,710	-----	-----
New Rochella.....	1909	42	882	39	108	735	620	1,377	113	482	814	1,669	855	42.2	51.3
	1904	28	595	23	55	517	-----	814	48	342	462	1,103	641	161.1	117.1
	1899	25	-----	-----	15	198	-----	392	12	110	278	508	230	-----	-----
New York City...	1909	25,938	680,510	29,055	97,453	554,002	429,003	1,364,353	122,074	323,698	1,092,155	2,029,693	937,538	19.2	33.0
	1904	20,839	552,952	24,650	63,586	464,716	-----	1,042,946	73,028	248,128	818,029	1,526,523	708,494	19.6	30.2
	1899	19,243	-----	-----	43,783	388,586	-----	853,238	51,656	196,656	634,210	1,172,870	538,660	-----	-----
Manhattan and Bronx.....	1909	19,769	500,299	22,658	77,849	399,792	213,964	822,726	94,972	237,467	725,456	1,431,089	705,633	17.9	37.2
	1904	15,975	410,324	19,387	51,716	339,221	-----	620,526	56,759	182,080	507,030	1,043,252	536,222	18.9	28.7
	1899	14,362	-----	-----	35,661	285,265	-----	511,917	40,724	146,505	398,076	810,808	412,732	-----	-----
Brooklyn.....	1909	5,218	145,222	5,495	15,844	123,883	147,580	362,337	21,146	68,328	235,132	417,223	182,091	18.0	11.7
	1904	4,182	119,524	4,597	9,932	104,995	-----	313,452	13,521	54,535	230,809	373,463	142,654	20.1	19.1
	1899	4,301	-----	-----	6,826	87,445	-----	263,471	9,097	42,341	206,335	313,617	107,282	-----	-----
Queens.....	1909	771	27,495	745	2,859	23,891	47,721	145,307	4,407	14,169	113,200	151,680	38,480	60.3	63.2
	1904	513	10,669	507	1,257	14,905	-----	92,977	1,336	8,440	70,403	92,941	22,538	39.5	162.3
	1899	395	-----	-----	912	10,684	-----	67,420	1,264	5,533	23,354	35,428	12,074	-----	-----
Richmond.....	1909	180	7,494	157	901	6,436	19,738	33,983	1,549	3,734	18,367	29,701	11,334	15.0	78.1
	1904	169	6,435	159	681	5,595	-----	15,991	912	3,073	9,787	16,867	7,080	7.8	29.6
	1899	185	-----	-----	384	5,192	-----	10,430	571	2,277	6,445	13,017	6,572	-----	-----
Niagara Falls.....	1909	156	7,214	117	1,008	6,089	95,792	37,239	1,441	3,588	14,271	28,652	14,381	33.1	69.4
	1904	85	5,132	54	504	4,574	-----	27,116	591	2,348	9,192	16,916	7,724	61.1	98.1
	1899	93	-----	-----	326	2,840	-----	14,344	384	1,318	4,888	8,540	3,652	-----	-----

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.		PERSONS ENGAGED IN INDUSTRY.						Expressed in thousands.					PER CENT OF INCREASE.		
STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	Wage earners (aver- age num- ber).	Value of prod- ucts.
New York—Contd.															
North Tonawanda.	1909	81	3,146	56	266	2,824	15,888	\$8,274	\$300	\$1,582	\$6,389	\$9,600	\$3,211		
Ogdensburg.	1909	75	1,463	61	143	1,259	3,404	2,617	148	517	3,508	4,948	1,440	25.5	61.9
	1904	55	1,064	46	89	929		2,722	89	341	2,263	3,057	794	14.8	35.2
	1899	74			86			1,664	68	306	1,501	2,261	760		
Olean.	1909	54	2,671	42	370	2,259	5,202	8,952	358	1,339	7,728	10,005	2,277		
Ossining.	1909	34	477	24	97	356	986	2,063	125	243	466	1,329	663		
Oswego.	1909	81	4,247	58	372	3,817	9,753	11,249	453	1,813	6,103	10,413	4,319	1.9	27.2
	1904	77	4,076	50	280	3,746		6,710	331	1,462	4,717	7,592	2,875	8.4	1.4
	1899	75			251	3,457		7,002	339	1,378	4,312	7,487	3,175		
Peekskill.	1909	52	2,384	46	283	2,055	3,133	3,828	340	1,241	2,942	7,888	4,946	5.0	8.8
	1904	46	2,158	45	156	1,857		3,595	218	1,025	2,262	4,970	4,970	52.3	306.7
	1899	37			86	1,281		1,427	95	620	761	1,783	1,622		
Plattsburg.	1909	41	1,243	33	161	1,049	5,739	2,694	158	513	1,745	3,137	1,292		
Port Chester.	1909	34	2,334	30	182	2,122	3,175	5,417	237	1,040	4,554	6,243	1,689		
Poughkeepsie.	1909	111	4,037	102	636	3,299	3,326	10,281	847	1,659	2,867	9,151	5,284	-12.6	27.0
	1904	108	4,229	105	349	3,775		6,657	357	1,641	2,533	7,297	3,674	84.3	29.2
	1899	118			185	2,810		5,182	231	1,236	2,981	5,576	2,395		
Rensselaer.	1909	33	842	28	51	763	1,263	2,146	161	364	1,166	2,296	1,130		
Rochester.	1909	1,203	46,617	1,042	6,467	39,108	39,277	95,708	7,734	21,518	50,674	112,676	62,902	23.1	29.9
	1904	1,109	37,128	1,084	4,265	31,779		69,807	4,529	14,702	37,918	81,109	43,191	12.3	23.9
	1899	1,221			3,061	28,049		45,210	3,131	11,366	28,245	59,669	31,424		
Rome.	1909	119	3,995	112	250	3,633	8,844	8,903	355	1,851	10,204	14,423	4,219	12.2	67.1
	1904	89	3,479	83	187	3,209		5,722	247	1,392	5,694	8,681	2,987	42.1	55.5
	1899	87			135	2,274		3,569	147	869	3,462	5,549	2,687		
Saratoga Springs.	1909	39	1,065	30	202	833	1,718	4,350	251	464	883	2,337	1,454	41.2	39.7
	1904	35	668	28	50	590		3,455	57	284	702	1,799	1,067	-2.0	29.1
	1899	44			157	602		1,490	120	211	678	1,394	656		
Schenectady.	1909	134	17,728	120	2,677	14,931	49,181	51,816	3,086	10,002	21,932	38,165	16,213	4.3	15.4
	1904	103	15,216	129	771	14,316		22,051	915	9,382	16,497	33,684	16,957	68.5	87.9
	1899	83			303	8,494		13,606	297	4,966	9,926	17,635	7,660		
Syracuse.	1909	738	21,710	655	2,907	18,148	20,796	51,726	3,313	10,422	21,776	49,435	27,659	24.7	42.5
	1904	637	16,926	660	1,722	14,554		38,653	1,954	7,116	16,092	34,687	18,605	23.2	39.7
	1899	630			1,264	11,809		28,928	1,316	5,368	12,549	26,549	13,998		
Troy.	1909	363	22,149	352	1,777	20,020	18,887	39,309	2,196	9,407	15,626	37,990	22,254	4.7	19.2
	1904	311	20,833	310	1,469	19,114		32,697	1,542	7,853	13,746	31,961	18,115	-16.7	19.9
	1899	327			972	22,933		25,274	1,268	8,876	11,462	29,739	17,277		
Utica.	1909	317	14,634	276	1,205	13,153	21,874	27,796	1,550	5,964	16,646	31,199	14,553	20.9	36.4
	1904	333	12,154	335	937	10,882		21,184	1,084	4,477	12,774	22,980	10,196	22.3	29.8
	1899	311			788	8,898		17,898	736	3,276	8,194	16,479	8,265		
Watertown.	1909	107	3,834	87	456	3,291	13,543	18,662	592	1,798	3,821	8,827	4,706	9.0	17.6
	1904	85	3,365	74	271	3,020		10,869	372	1,612	3,342	7,251	3,909	-6.3	5.3
	1899	91			206	3,223		7,938	267	1,599	3,708	6,888	3,180		
Watervliet.	1909	36	880	33	94	753	904	1,423	127	302	816	1,669	833	-32.2	-4.0
	1904	36	1,227	33	83	1,111		1,353	115	479	539	1,738	999	11.1	15.3
	1899	41			62	1,000		1,693	78	374	733	1,567	774		
White Plains.	1909	33	333	28	56	249	404	2,085	54	189	372	816	444		
Yonkers.	1909	158	13,746	150	885	12,711	16,978	58,709	1,298	6,726	43,202	59,334	16,132	20.0	74.9
	1904	106	10,347	104	464	9,779		33,731	721	4,519	23,330	35,549	10,219	29.4	39.9
	1899	107			308	7,555		12,239	437	3,264	9,542	17,394	7,792		
North Carolina:															
7 cities.	1909	453	21,058	299	1,962	18,797	32,764	46,268	2,155	5,775	29,817	61,171	31,354		
6 cities.	1904	323	12,510	277	1,080	11,153		19,773	1,617	3,056	11,164	23,956	12,692		
6 cities.	1899	256			718	9,264		12,317	673	2,063	7,361	14,531	7,149		
Asheville.	1909	52	1,148	43	121	984	2,095	2,827	140	359	2,266	3,250	955	24.2	69.4
	1904	45	910	51	67	792		1,522	66	229	1,918	671	479	-1.5	47.5
	1899	37			45	804		1,174	35	225	821	1,300			
Charlotte.	1909	108	4,705	54	452	4,199	12,334	9,451	522	1,557	6,531	10,460	3,929	39.0	115.7
	1904	73	2,537	51	252	2,234		4,560	239	660	4,950	2,969	1,981	-19.8	15.9
	1899	57			175	2,787		3,808	167	621	2,604	4,187	1,260		
Durham.	1909	61	4,030	45	267	3,718	5,257	15,389	302	1,057	9,819	23,271	13,461		
Greensboro.	1909	61	1,132	45	135	952	1,545	1,695	131	338	1,106	2,081	925	-13.3	16.5
	1904	63	1,261	60	103	1,098		1,548	71	317	978	1,744	796	62.2	69.3
	1899	43			64	677		883	47	152	508	926	418		
Raleigh.	1909	55	1,249	43	183	1,023	2,970	2,027	174	384	1,276	2,376	1,190	74.9	113.6
	1904	42	719	30	104	585		804	78	226	512	1,067	573	5.6	14.3
	1899	39			104	549		738	68	229	433	947	514		
Wilmington.	1909	64	1,386	44	129	1,213	4,580	2,022	123	470	1,902	3,065	1,162	-22.9	3.5
	1904	53	1,794	44	156	1,594		1,837	130	605	1,715	2,904	1,189	2.6	27.2
	1899	50			92	1,553		1,758	74	476	1,392	2,263	951		

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.										
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (average number).								Wage earners (average number).										
Expressed in thousands.																									
North Carolina—Con. Winston.....	1909	52	7,408	25	675	6,708	3,933	\$12,856	\$763	\$1,580	\$6,896	\$16,778	\$9,882	38.3	47.8										
	1904	47	5,289	41	398	4,850	.....	9,212	433	986	3,843	11,353	7,510	67.6	132.8									
	1899	30	.....	.....	238	2,894	.....	3,969	282	309	1,633	4,888	3,255	.....	.....								
North Dakota: 2 cities.....	1909	99	1,219	74	285	860	1,562	3,463	304	543	2,661	4,387	1,726	.....	.....								
Fargo.....	1909	61	746	43	193	510	789	2,077	192	325	1,410	2,477	1,067	.....	.....								
Grand Forks.....	1909	38	473	31	92	350	773	1,376	112	218	1,251	1,910	659	.....	.....								
Ohio: 36 cities.....	1909	8,765	378,363	7,260	47,744	323,359	1,026,116	960,362	57,047	179,801	607,301	1,077,617	470,316	.....	.....								
28 cities.....	1904	7,297	287,636	6,695	28,503	251,438	.....	597,436	32,999	128,250	368,734	677,497	308,763	.....	.....								
28 cities.....	1899	6,990	.....	.....	21,830	220,141	.....	423,277	22,107	98,923	289,300	540,824	251,624	.....	.....								
Akron.....	1909	246	19,023	159	3,033	15,831	36,263	58,216	3,004	8,936	43,071	73,158	30,087	64.5	118.0										
	1904	186	10,706	128	952	9,626	.....	28,638	1,115	4,893	20,410	33,559	13,149	16.6	52.4									
	1899	178	.....	.....	1,093	8,259	.....	23,725	892	3,615	12,720	22,016	9,296	.....	.....								
Alliance.....	1909	44	3,026	35	467	2,524	3,453	7,212	447	1,462	2,853	6,135	3,282	.....	.....								
Ashtabula.....	1909	44	1,601	31	99	1,471	2,379	2,076	138	814	2,084	3,459	1,375	73.9	82.5										
	1904	36	934	32	56	846	.....	1,286	57	456	996	1,895	899	126.8	114.4									
	1899	29	.....	.....	46	373	.....	707	34	165	527	884	357	.....	.....								
Bellara.....	1909	36	2,846	44	205	2,597	17,790	6,427	225	1,412	7,159	10,091	2,932	.....	.....								
Cambridge.....	1909	32	1,406	30	146	1,230	5,055	2,379	105	919	2,885	4,291	1,406	.....	.....								
Canton.....	1909	204	11,313	129	1,220	9,964	27,016	25,342	1,347	5,719	14,644	28,583	13,939	67.8	169.9										
	1904	158	6,666	131	597	5,938	.....	12,850	636	2,964	4,594	10,591	5,997	15.3	10.6									
	1899	164	.....	.....	504	5,149	.....	9,055	497	2,345	4,349	8,575	5,226	.....	.....								
Chillicothe.....	1909	57	1,872	59	139	1,674	3,558	2,364	135	707	3,038	4,345	1,307	7.8	38.1										
	1904	64	1,751	65	133	1,553	.....	1,694	114	570	1,928	3,147	1,219	39.7	94.7									
	1899	46	.....	.....	73	1,112	.....	1,054	44	423	678	1,616	738	.....	.....								
Cincinnati.....	1909	2,184	72,488	2,015	10,281	60,192	88,597	150,264	12,759	31,101	101,932	194,516	92,584	2.7	17.1										
	1904	2,171	68,954	2,180	8,190	58,584	.....	130,272	9,077	27,390	83,258	166,059	82,801	6.6	17.2									
	1899	2,454	.....	.....	6,164	54,942	.....	103,464	6,437	23,104	71,391	141,678	70,287	.....	.....								
Cleveland.....	1909	2,148	98,686	1,718	12,240	84,728	199,898	227,397	15,506	48,053	154,915	271,961	117,046	32.3	58.2										
	1904	1,616	72,362	1,445	6,876	64,041	.....	156,321	8,299	33,450	97,578	171,924	74,346	15.7	23.4									
	1899	1,360	.....	.....	5,064	55,341	.....	101,243	5,453	26,518	70,465	139,356	62,891	.....	.....								
Columbus.....	1909	586	20,523	435	3,660	16,428	35,780	48,747	3,781	8,892	25,204	49,032	23,828	14.5	24.0										
	1904	459	17,127	422	2,355	14,350	.....	29,225	2,337	7,287	19,244	39,530	20,286	4.1	13.8									
	1899	408	.....	.....	1,573	13,787	.....	23,462	1,615	6,028	18,252	34,748	16,496	.....	.....								
Dayton.....	1909	513	24,740	416	2,775	21,549	31,501	61,816	3,572	12,451	27,528	60,378	32,850	26.1	52.5										
	1904	431	19,836	406	2,337	17,093	.....	32,901	2,707	8,693	18,505	39,597	21,092	18.6	27.7									
	1899	425	.....	.....	1,378	14,408	.....	26,283	1,514	6,909	14,330	31,015	16,685	.....	.....								
East Liverpool.....	1909	82	5,254	49	332	4,873	5,528	7,988	448	2,764	2,521	6,629	4,108	-6.8	3.0										
	1904	81	5,586	56	302	5,228	.....	6,972	363	2,703	2,107	6,437	4,330	25.3	35.6									
	1899	75	.....	.....	283	4,171	.....	4,960	288	1,970	1,463	4,749	3,286	.....	.....								
Elyria.....	1909	58	3,117	30	414	2,673	9,058	7,324	464	1,573	4,495	8,065	3,570	.....	.....								
Findlay.....	1909	74	1,623	67	180	1,376	2,574	2,955	186	574	2,094	3,487	1,393	2.5	19.2										
	1904	71	1,522	78	101	1,343	.....	2,659	105	625	1,579	2,925	1,346	21.3	73.5									
	1899	80	.....	.....	104	1,107	.....	1,693	85	453	751	1,686	935	.....	.....								
Hamilton.....	1909	125	7,770	81	794	6,895	22,563	24,629	1,318	3,798	9,640	18,184	8,544	12.9	31.7										
	1904	113	6,679	97	475	6,107	.....	18,874	774	3,321	6,384	13,811	7,427	18.7	29.6									
	1899	97	.....	.....	273	5,147	.....	10,243	866	2,316	5,003	10,656	5,653	.....	.....								
Ironton.....	1909	63	2,119	51	148	1,920	15,548	4,993	198	888	4,994	7,118	2,124	6.7	49.7										
	1904	57	1,971	46	125	1,800	.....	3,356	144	824	3,423	4,755	1,332	14.1	-12.1									
	1899	53	.....	.....	93	1,577	.....	3,212	106	699	3,145	5,411	2,266	.....	.....								
Lancaster.....	1909	42	1,657	48	77	1,532	2,453	1,459	75	677	3,051	4,074	1,023	.....	.....								
Lima.....	1909	85	3,899	79	213	3,607	3,264	5,488	363	2,024	3,869	7,754	3,885	32.0	60.6										
	1904	77	3,005	73	199	2,733	.....	3,894	196	1,322	2,255	4,828	2,573	38.0	-22.4									
	1899	76	.....	.....	153	1,980	.....	5,361	158	942	3,936	6,223	2,287	.....	.....								
Lorain.....	1909	57	7,347	36	614	6,697	208,992	34,387	762	4,788	24,222	38,987	14,765	115.9	169.0										
	1904	43	3,416	26	288	3,102	.....	10,599	255	2,832	9,708	14,491	4,783	38.9	52.8									
	1899	26	.....	.....	134	2,233	.....	12,684	137	1,102	6,485	9,481	2,996	.....	.....								
Mansfield.....	1909	121	3,901	120	577	3,204	5,077	8,539	585	1,472	4,356	8,173	3,817	6.1	11.1										
	1904	109	3,509	112	466	3,021	.....	8,295	465	1,309	3,523	7,354	3,831	15.2	21.0									
	1899	95	.....	.....	316	2,622	.....	5,457	296	973	2,705	6,076	3,371	.....	.....								
Marietta.....	1909	66	1,549	59	202	1,288	2,742	3,275	190	594	1,787	3,214	1,427	-2.0	23.7										
	1904	73	1,515	56	145	1,314	.....	2,557	139	610	1,366	2,599	1,233	-13.0	8.4									
	1899	77	.....	.....	125	1,511	.....	1,935	112	590	1,500	2,398	1,248	.....	.....								
Marion.....	1909	55	3,028	40	369	2,619	3,686	7,864	416	1,405	2,577	5,667	3,090	52.2	75.6										
	1904	47	1,965	32	212	1,721	.....	3,395	230	865	1,352	3,228	1,876	47.0	33.1									
	1899	34	.....	.....	121	1,171	.....	2,917	114	556	966	2,426	1,490	.....	.....								

1 Does not include statistics for Lakewood.

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.		
				Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).	Wage earners (average number).
	Ohio—Continued.																
	Massillon.....	1909	56	2,193	37	222	1,034	4,730	\$7,788	\$282	\$1,127	\$2,290	\$4,788	\$2,468	-3.1	29.3	
		1904	52	2,177	46	136	1,095		5,745	178	1,158	1,582	3,707	2,125	35.3	34.8	
		1899	49			87	1,474		3,975	81	745	1,263	2,749	1,486			
	Middletown.....	1909	41	2,992	22	394	2,576	9,304	10,564	473	1,389	7,950	16,517	8,567			
	Newark.....	1909	72	4,282	63	306	3,913	8,630	9,036	315	1,958	3,982	7,851	3,869	7.9	39.9	
		1904	78	3,936	83	226	3,627		3,834	216	2,130	2,433	5,613	3,180	74.8	95.0	
		1899	69			147	2,075		1,681	122	810	1,180	2,879	1,699			
	Norwood.....	1909	49	4,445	31	507	3,907	6,381	13,388	632	2,081	4,021	9,684	5,663			
	Piqua.....	1909	82	3,073	74	316	2,683	5,062	5,444	402	1,292	3,852	6,931	3,079	31.3	71.7	
		1904	76	2,282	62	176	2,044		3,196	210	947	1,908	4,036	2,128	4.6	-27.3	
		1899	68			193	1,955		3,516	201	914	3,610	5,552	1,942			
	Portsmouth.....	1909	75	4,319	54	537	3,728	4,028	6,385	680	1,459	3,894	7,277	3,383	-8.4	9.5	
		1904	81	4,500	68	360	4,072		4,670	318	1,479	3,520	6,645	3,125	-2.0	-0.2	
		1899	100			365	4,153		3,626	302	1,341	3,405	6,559	3,254			
	Sandusky.....	1909	91	2,518	59	341	2,118	4,856	6,495	353	1,006	2,835	5,947	3,112	-8.8	21.9	
		1904	93	2,666	78	265	2,323		6,727	258	1,028	2,136	4,879	2,743	59.9	72.2	
		1899	81			142	1,453		4,453	135	571	1,207	2,834	1,627			
	Springfield.....	1909	195	8,634	161	1,068	7,405	10,179	22,485	1,262	3,685	8,919	19,246	10,327	18.3	43.8	
		1904	157	7,215	103	854	6,258		19,739	937	3,253	5,762	13,382	7,620	-0.7	10.4	
		1899	164			1,282	6,299		13,844	1,102	3,015	5,289	12,116	6,527			
	Stevensville.....	1909	55	4,638	55	316	4,267	37,748	18,424	403	3,203	14,443	21,187	6,744	2.0	71.3	
		1904	72	4,517	78	255	4,184		12,627	321	2,328	8,243	12,370	4,127	136.0	172.0	
		1899	54			88	1,773		2,303	74	734	2,406	4,547	2,141			
	Tiffin.....	1909	75	1,970	78	260	1,632	3,257	3,727	224	828	1,252	3,254	2,002	-0.8	33.7	
		1904	87	1,874	94	135	1,845		2,714	125	664	1,000	2,434	1,434	32.9	28.0	
		1899	75			100	1,288		2,252	75	524	808	1,902	1,094			
	Toledo.....	1909	760	22,900	665	3,357	18,878	43,946	58,319	3,632	9,911	34,084	61,230	27,146	20.3	37.6	
		1904	597	18,504	521	2,286	15,697		38,445	2,285	8,099	25,466	44,501	19,035	23.1	39.2	
		1899	445			1,162	12,747		23,788	1,143	5,576	19,397	31,976	12,579			
	Warren.....	1909	68	2,174	41	335	1,798	5,530	4,511	421	911	3,064	5,988	2,924			
	Youngstown.....	1909	115	11,851	94	1,259	10,498	140,907	87,160	1,593	7,835	62,292	81,271	18,979	29.7	73.5	
		1904	113	8,903	86	722	8,095		40,956	870	5,460	35,183	46,833	11,670	-6.7	38.2	
		1899	103			414	8,679		22,084	478	4,730	23,133	33,908	10,775			
	Zanesville.....	1909	109	3,586	95	341	3,150	8,783	6,025	351	1,793	5,504	9,145	3,641	1.7	44.1	
		1904	99	3,468	91	279	3,098		4,995	268	1,590	3,291	6,347	3,056	-9.0	11.2	
		1899	115			323	3,405		4,120	246	1,255	3,088	5,708	2,622			
	Oklahoma:																
	8 cities.....	1909	486	5,918	445	1,089	4,384	14,416	12,061	1,004	2,841	12,895	20,005	7,110			
	2 cities.....	1904	123	1,346	99	194	1,053		4,716	188	608	3,063	4,871	1,808			
	2 cities.....	1899	69			72	461		844	56	200	854	1,494	640			
	Chickasha.....	1909	30	465	30	71	364	1,488	1,117	73	242	1,285	1,867	582			
	Enid.....	1909	65	455	55	97	303	1,722	1,097	76	191	1,807	2,453	646			
	Guthrie.....	1909	34	385	32	71	282	1,281	1,092	76	163	947	1,442	496	-15.3	20.2	
		1904	34	410	28	49	333		794	46	186	701	1,200	499	38.2	84.9	
		1899	33			39	241		371	32	99	337	649	312			
	McAlester.....	1909	29	240	28	32	180	895	619	29	101	195	451	256			
	Muskogee.....	1909	64	554	61	112	381	1,421	969	106	241	1,478	2,279	801			
	Oklahoma City ..	1909	171	2,087	148	541	1,398	4,132	4,482	483	973	5,146	7,888	2,722			
		1904	89	936	71	145	720		3,922	142	422	2,362	3,671	1,309	94.2	114.3	
		1899	36			33	220		473	24	101	517	845	328	227.3	334.4	
	Shawnee.....	1909	40	1,147	35	98	1,014	1,891	1,532	89	615	1,163	2,081	918			
	Tulsa.....	1909	53	585	56	67	462	1,586	1,153	72	315	874	1,563	689			
	Oregon:																
	2 cities.....	1909	711	15,680	820	2,049	12,811	33,810	38,657	2,339	9,346	27,253	49,009	21,816			
	1 city.....	1904	437	9,594	398	1,025	8,171		19,725	1,266	5,342	17,024	28,651	11,627			
	1 city.....	1899	408			663	5,380		11,633	732	2,704	10,177	16,904	6,727			
	Portland.....	1909	649	14,891	763	1,914	12,214	32,122	37,996	2,241	8,979	26,076	46,861	20,785	49.5	63.6	
		1904	437	9,594	398	1,025	8,171		19,725	1,266	5,342	17,024	28,651	11,627	51.9	69.5	
		1899	408			663	5,380		11,633	732	2,704	10,177	16,904	6,727			
	Salem.....	1909	62	789	57	135	597	1,688	1,661	98	367	1,177	2,208	1,031			
	Pennsylvania:																
	63 cities.....	1909	15,036	633,895	15,836	65,925	552,134	1,510,673	1,674,719	76,983	286,382	996,512	1,662,896	686,386			
	42 cities.....	1904	12,417	524,692	13,634	43,346	467,712		1,166,367	48,186	224,511	870,511	1,171,819	501,308			
	42 cities.....	1899	12,388			31,483	431,181		909,225	33,677	194,292	622,796	1,074,530	451,734			
	Allentown.....	1909	274	12,628	314	833	11,481	19,101	21,569	874	5,061	15,581	26,263	10,682	27.8	55.9	
		1904	257	9,859	312	563	8,984		13,455	524	3,312	9,873	16,841	6,998	22.1	12.3	
		1899	216			356	7,355		11,343	310	2,634	8,977	14,990	6,013			

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES:
1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (aver- age num- ber).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Expressed in thousands.																
Pennsylvania—Con.																
Altoona.....	1909	44	9,100	41	650	8,409	9,158	\$16,094	\$649	\$5,750	\$9,134	\$16,763	\$7,629	-11.9	16.8	
	1904	73	10,069	81	448	9,540		11,238	359	5,564	7,248	14,350	7,102	45.1	27.3	
	1899	57			303	6,573		6,380	210	3,717	6,883	11,273	4,390			
Beaver Falls.....	1909	44	2,456	34	242	2,180	5,141	7,503	287	1,218	3,015	6,400	3,385	-2.3	30.4	
	1904	42	2,492	26	234	2,232		6,518	280	1,123	2,242	4,908	2,666	2.7	-21.2	
	1899	47			142	2,174		6,521	174	971	3,859	6,229	2,370			
Bethlehem.....	1909	49	1,727	54	90	1,583	3,086	3,300	105	593	2,330	3,712	1,382			
Bradock.....	1909	41	1,218	36	142	1,040	7,332	5,369	160	785	3,347	5,094	1,747	-15.1	23.5	
	1904	38	1,365	34	106	1,225		3,283	118	756	2,738	4,125	1,387	50.3	0.8	
	1899	30			64	815		2,472	55	526	2,565	4,091	1,626			
Bradford.....	1909	82	1,650	104	228	1,318	3,856	4,226	229	655	2,442	3,887	1,445	-11.5	21.8	
	1904	80	1,734	91	153	1,490		3,276	161	841	1,593	3,192	1,599	24.2	2.1	
	1899	65			74	1,200		2,122	80	697	1,635	3,125	1,490			
Butler.....	1909	61	3,344	102	419	2,823	10,405	16,769	457	1,571	7,594	11,058	3,464	34.9	61.9	
	1904	48	2,489	74	322	2,093		9,910	374	1,114	4,660	6,832	2,172	164.3	387.0	
	1899	41			33	792		1,419	44	416	520	1,403	883			
Carbondale.....	1909	34	1,636	29	104	1,503	1,407	2,307	123	636	1,253	2,523	1,270	1.9	8.9	
	1904	32	1,631	22	134	1,475		2,679	171	606	1,113	2,316	1,203	44.2	102.1	
	1899	26			67	1,023		1,452	68	340	470	1,146	676			
Carlisle.....	1909	50	1,590	148	108	1,334	1,735	2,054	144	511	1,431	2,496	1,065			
Carnegie.....	1909	19	509	17	70	422	1,245	2,371	94	275	2,441	3,099	658			
Chambersburg....	1909	57	1,631	56	211	1,364	3,126	3,484	177	599	1,170	2,456	1,288			
Chester.....	1909	128	7,867	102	779	6,986	17,131	23,928	965	3,392	11,576	19,373	7,797	-1.1	18.4	
	1904	131	7,612	120	431	7,061		22,070	607	3,417	10,422	16,645	6,223	1.3	11.4	
	1899	121			307	6,972		17,672	486	3,131	8,571	14,940	6,369			
Columbia.....	1909	47	2,944	45	126	2,773	6,589	3,590	130	1,107	2,671	4,807	2,136	-8.6	23.7	
	1904	44	3,187	38	115	3,034		2,994	105	943	2,453	3,887	1,434	20.4	-7.8	
	1899	53			83	2,519		2,266	61	881	2,572	4,214	1,642			
Connellsville....	1909	39	1,269	28	206	1,035	4,526	3,275	194	576	817	1,971	1,154			
Dubois.....	1909	37	1,210	37	158	1,015	3,199	2,394	133	507	926	1,890	964			
Dunmore.....	1909	18	1,423	15	99	1,308	1,266	938	133	603	670	1,851	1,181	15.4	26.8	
	1904	15	1,219	9	77	1,133		1,041	114	464	550	1,460	910	84.5	29.0	
	1899	18			50	614		1,021	47	276	490	1,132	642			
Easton.....	1909	126	3,769	138	243	3,388	5,965	7,687	246	1,524	3,424	6,915	3,491	24.6	38.7	
	1904	97	3,047	106	221	2,720		4,336	190	1,180	2,684	5,059	2,375	-15.1	-5.7	
	1899	106			147	3,202		4,346	129	1,200	3,193	5,425	2,232			
Erie.....	1909	391	11,142	364	982	9,796	22,038	30,620	1,289	5,101	12,064	24,226	12,162	16.4	30.0	
	1904	261	9,337	233	689	8,415		22,963	819	4,363	9,427	18,639	9,212	4.8	13.0	
	1899	260			617	8,032		19,063	655	3,925	8,208	16,493	8,285			
Greensburg.....	1909	47	393	50	33	310	738	938	32	163	330	726	396			
Harrisburg.....	1909	199	11,024	190	1,091	9,743	22,355	22,925	1,068	4,541	14,083	22,725	8,642	22.5	37.1	
	1904	175	8,601	169	477	7,955		15,921	500	3,673	10,327	16,571	6,244	23.5	10.5	
	1899	175			377	6,439		7,997	382	2,528	9,005	14,966	5,991			
Hazleton.....	1909	77	2,998	84	232	2,682	3,112	5,209	250	940	2,702	4,707	2,005	90.8	115.3	
	1904	62	1,575	65	104	1,406		2,575	107	434	1,130	2,186	1,056	71.0	118.8	
	1899	45			72	822		1,320	50	234	293	999	706			
Homestead.....	1909	26	248	17	60	171	890	1,273	49	111	322	659	337	-44.3	-7.6	
	1904	27	369	27	35	307		733	45	171	265	713	448	87.2	168.0	
	1899	15			12	164		173	10	93	101	266	165			
Johnstown.....	1909	97	11,671	121	976	10,574	119,508	47,242	1,003	6,304	32,348	48,106	15,758	52.9	66.5	
	1904	82	7,716	99	703	6,914		59,589	729	3,865	19,755	28,892	9,137	23.5	35.2	
	1899	66			367	5,600		16,437	433	2,965	13,908	21,365	7,457			
Lancaster.....	1909	308	8,981	317	707	7,957	10,037	17,443	813	3,236	8,841	15,979	7,138	-8.5	9.1	
	1904	300	9,432	324	415	8,693		12,395	415	3,089	7,598	14,648	7,050	15.8	14.9	
	1899	284			362	7,504		9,470	356	2,569	6,463	12,750	6,297			
Lebanon.....	1909	109	6,077	105	381	5,691	21,717	12,276	409	2,441	6,778	11,429	4,651	27.4	63.8	
	1904	103	4,841	111	343	4,387		7,831	304	1,791	3,279	6,978	3,699	-2.0	-8.9	
	1899	97			177	4,475		5,675	175	1,779	4,745	7,658	2,913			
McKeesport.....	1909	68	9,093	58	789	8,246	49,935	43,433	891	6,031	27,296	42,495	15,199	-6.8	84.3	
	1904	75	9,618	74	696	8,848		16,286	778	5,521	12,310	23,054	10,744	22.7	-36.1	
	1899	57			473	7,213		15,088	445	4,147	21,835	36,058	14,223			
McKees Rocks....	1909	31	3,903	21	291	3,591	8,872	10,328	335	2,309	5,407	9,787	4,380			
Mahany City....	1909	33	666	44	32	590	753	994	20	166	383	868	485	147.9	101.4	
	1904	29	293	33	22	238		467	41	93	133	431	298	-20.9	7.6	
	1899	29			23	301		511	15	74	113	401	288			
Meadville.....	1909	62	2,506	54	404	2,048	2,539	2,725	337	974	1,716	3,559	1,843	57.5	71.5	
	1904	52	1,520	63	157	1,300		1,761	115	602	964	2,075	1,111	8.2	24.4	
	1899	46			95	1,201		1,168	74	535	889	1,668	779			

* While the population for 1900 was in excess of 10,000, statistics for that census are not available.

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (aver- age num- ber).	Value of prod- ucts.
Expressed in thousands.															
Pennsylvania—Con.															
Mount Carmel.....	1909	20	651	28	23	600	322	\$435	\$19	\$144	\$416	\$785	\$369	204.6	26.6
	1904	19	238	29	12	197	.....	317	11	79	427	620	193	80.7	57.8
	1899	9	.....	.....	11	109	.....	334	7	39	260	363	133	.....	.....
Nanticoke.....	1909	17	378	15	15	348	447	420	24	120	180	423	243	52.0	18.2
	1904	12	263	13	21	229	.....	314	16	65	160	358	198	63.6	15.5
	1899	17	.....	.....	29	140	.....	291	6	44	182	310	128	.....	.....
New Castle.....	1909	82	6,063	73	651	5,339	64,697	27,028	753	3,870	30,974	38,038	7,064	-1.7	31.5
	1904	71	6,050	69	548	5,433	.....	18,490	611	3,430	21,212	28,923	7,711	20.0	44.5
	1899	71	.....	.....	184	4,529	.....	12,953	239	2,988	13,146	20,016	6,870	.....	.....
Norristown.....	1909	111	4,223	104	301	3,818	5,713	6,984	378	1,553	3,274	7,413	4,139	8.6	25.1
	1904	84	3,781	66	198	3,517	.....	5,307	226	1,315	2,867	5,925	3,058	19.5	44.3
	1899	77	.....	.....	154	2,944	.....	3,674	126	977	2,159	4,107	1,948	.....	.....
Oil City.....	1909	34	1,593	44	211	1,338	2,467	3,847	227	903	2,300	4,122	1,822	-14.1	33.7
	1904	36	1,755	31	167	1,557	.....	4,387	171	928	1,334	3,062	1,748	-7.5	-40.3
	1899	42	.....	.....	105	1,683	.....	3,804	138	878	3,688	5,164	1,476	.....	.....
Philadelphia.....	1909	8,379	294,498	9,162	33,452	251,884	365,950	691,397	39,446	126,381	429,092	746,076	316,984	10.0	26.2
	1904	7,087	259,878	8,140	22,839	228,899	.....	520,179	25,396	107,640	333,352	691,388	258,036	6.6	13.7
	1899	7,503	.....	.....	17,498	214,775	.....	445,725	18,931	94,737	295,175	519,982	224,807	.....	.....
Phoenixville.....	1909	31	2,822	37	186	2,599	15,152	8,765	235	1,180	3,717	5,876	2,159	.....	.....
Pittsburgh.....	1909	1,659	79,625	1,553	10,598	67,474	307,666	283,139	12,683	39,973	148,527	243,454	94,927	-5.8	15.2
	1904	1,562	81,407	1,516	8,273	71,618	.....	260,765	9,753	39,805	124,581	211,259	86,678	-0.2	-3.2
	1899	1,201	.....	.....	5,850	71,794	.....	211,774	6,351	37,635	126,458	216,198	89,740	.....	.....
Pittston.....	1909	40	942	39	111	792	2,133	2,337	92	316	1,067	1,969	902	.....	.....
	1904	40	937	44	63	830	.....	1,614	72	307	728	1,475	747	182.5	47.8
	1899	27	.....	.....	41	357	.....	902	39	158	623	998	375	.....	.....
Plymouth.....	1909	23	986	21	57	908	1,412	2,544	49	281	704	1,179	475	9.8	37.1
	1904	23	906	23	56	827	.....	669	34	210	447	880	413	9.4	61.4
	1899	24	.....	.....	37	756	.....	470	20	139	241	533	292	.....	.....
Pottstown.....	1909	78	4,123	84	389	3,650	17,415	9,961	494	1,722	8,999	12,505	3,506	5.6	53.5
	1904	77	3,825	97	271	3,457	.....	6,420	295	1,516	5,438	8,145	2,707	28.9	10.7
	1899	65	.....	.....	159	2,681	.....	4,683	135	1,166	4,845	7,357	2,512	.....	.....
Pottsville.....	1909	91	3,342	100	370	2,872	15,262	13,982	341	1,326	5,927	9,138	3,211	50.8	57.4
	1904	79	2,127	87	136	1,904	.....	3,304	150	759	4,025	5,806	1,781	12.1	20.2
	1899	77	.....	.....	139	1,699	.....	3,107	105	561	3,430	4,830	1,400	.....	.....
Reading.....	1909	482	26,407	517	1,745	24,145	43,193	41,053	1,810	11,011	29,848	51,135	21,287	33.7	67.7
	1904	402	19,763	441	1,269	18,053	.....	27,123	1,098	7,265	16,709	30,491	13,782	6.9	-6.7
	1899	403	.....	.....	941	16,892	.....	25,934	855	6,583	16,996	32,682	15,686	.....	.....
Scranton.....	1909	293	14,242	270	1,121	12,851	20,564	22,494	1,337	5,146	14,302	26,385	12,083	17.8	29.0
	1904	258	11,901	243	746	10,912	.....	19,161	840	4,428	11,253	20,453	9,200	-2.0	-17.3
	1899	247	.....	.....	550	11,139	.....	18,984	710	4,388	17,220	24,742	7,522	.....	.....
Shamokin.....	1909	39	1,744	34	87	1,623	1,862	3,227	121	499	2,129	3,544	1,415	80.9	145.4
	1904	48	980	61	22	897	.....	1,115	260	260	1,026	1,444	418	17.7	25.9
	1899	46	.....	.....	34	762	.....	685	29	197	700	1,147	447	.....	.....
Sharon.....	1909	45	3,795	51	428	3,316	27,462	14,649	455	2,000	6,683	9,881	3,198	.....	.....
Shenandoah.....	1909	29	301	24	35	242	1,382	1,051	37	134	336	888	552	42.4	49.2
	1904	30	219	30	19	170	.....	740	18	100	181	595	414	58.9	97.0
	1899	22	.....	.....	9	107	.....	313	11	47	94	302	208	.....	.....
South Bethlehem.....	1909	49	8,469	65	418	7,985	31,562	41,121	604	4,973	15,967	26,417	10,450	38.8	72.9
	1904	46	6,104	45	305	5,754	.....	18,059	395	2,753	7,261	15,275	8,014	23.9	53.3
	1899	38	.....	.....	254	4,645	.....	8,047	321	2,113	4,862	9,964	5,102	.....	.....
Steeltown ¹	1904	18	5,109	13	440	4,656	.....	18,643	594	3,041	10,750	15,746	4,996	-2.2	12.2
	1899	18	.....	.....	271	4,762	.....	6,266	274	2,084	9,936	14,034	4,098	.....	.....
Sunbury.....	1909	39	2,339	42	228	2,069	2,835	4,768	297	1,118	2,228	4,450	2,222	.....	.....
Uniontown.....	1909	41	492	38	119	335	1,620	1,686	163	225	379	1,347	968	.....	.....
Warren.....	1909	72	1,767	70	208	1,489	3,960	5,796	266	836	3,676	5,744	2,068	.....	.....
Washington.....	1909	75	2,387	68	198	2,126	4,216	3,983	264	1,119	2,447	4,837	2,380	.....	.....
West Chester.....	1909	35	1,113	35	162	916	934	2,489	182	478	667	2,146	1,479	.....	.....
Wilkes-Barre.....	1909	176	8,329	177	599	7,553	12,109	16,011	743	3,323	6,433	13,526	7,093	27.6	23.0
	1904	129	6,485	152	423	5,920	.....	11,716	481	2,496	5,265	11,000	5,735	24.7	27.7
	1899	138	.....	.....	302	4,749	.....	9,702	381	1,745	4,309	8,617	4,808	.....	.....
Wilkinsburg.....	1909	24	231	21	25	185	1,016	535	21	129	262	538	276	0.5	14.0
	1904	30	230	24	22	184	.....	427	23	127	235	472	237	84.0	91.9
	1899	16	.....	.....	8	100	.....	216	4	62	126	246	120	.....	.....
Williamsport.....	1909	159	6,534	139	754	5,841	11,713	14,070	768	2,527	7,060	13,348	6,288	6.5	17.4
	1904	115	5,880	133	451	5,296	.....	12,004	485	2,026	6,016	11,367	5,351	12.3	16.9
	1899	142	.....	.....	358	4,717	.....	8,661	320	1,767	5,601	9,726	4,125	.....	.....

¹ Included in "all other cities" for 1909.

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

STATE AND CITY.	Cen- sus.	Num- ber of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.					Primary horse- power.	Capital.	Sala- ries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.		
			Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).	Wage earners (average number).								Wage earners (average number).	Value of products.	Value of products.
Pennsylvania—Con.																	
York.....	1909	218	11,530	221	817	10,492	15,344	\$22,419	\$1,133	\$4,438	\$8,806	\$18,622	\$9,756	31.9	39.7		
	1904	228	8,838	266	620	7,952	.....	14,292	634	3,039	6,480	13,333	6,853	16.1	26.3	
	1899	241	.....	.....	348	6,851	.....	8,794	416	2,346	5,460	10,560	5,100	.....	.....
All other cities ¹	1909	99	20,296	78	1,935	18,283	165,503	106,264	2,445	12,977	77,960	103,288	25,328	.....	.....
Rhode Island:																	
9 cities.....	1909	1,656	99,121	1,463	6,516	91,142	163,335	233,477	9,146	45,082	124,982	226,192	101,210	.....	.....
8 cities.....	1904	1,320	77,807	1,278	4,586	71,943	.....	158,340	5,894	32,709	87,248	157,762	70,514	.....	.....
8 cities.....	1899	1,358	.....	.....	3,430	66,718	.....	131,794	4,410	27,840	70,418	131,530	61,112	.....	.....
Central Falls.....	1909	43	2,612	26	111	2,475	4,992	4,975	145	1,021	3,381	5,471	2,090	1.3	7.6		
	1904	33	2,553	30	85	2,443	.....	4,950	123	965	3,330	5,091	1,761	3.0	12.9	
	1899	36	.....	.....	76	2,372	.....	3,970	104	883	2,726	4,511	1,785	.....	.....
Cranston.....	1909	28	1,921	16	194	1,711	3,707	5,030	232	1,003	2,887	5,625	2,738	191.5	243.2		
	1904	13	656	8	61	587	.....	1,902	86	332	596	1,639	1,043	19.1	16.8	
	1899	13	.....	.....	45	493	.....	1,817	69	249	613	1,403	790	.....	.....
Cumberland.....	1909	29	5,498	19	120	5,359	15,112	16,351	280	2,231	4,618	9,827	5,209	.....	.....
East Providence.....	1909	26	2,237	14	182	2,041	7,123	6,479	262	932	5,060	7,146	2,086	47.8	28.9		
	1904	21	1,492	15	96	1,381	.....	3,643	117	574	4,254	5,544	1,290	65.2	3.7	
	1899	15	.....	.....	42	836	.....	2,191	49	332	4,288	5,347	1,059	.....	.....
Newport.....	1909	54	890	54	110	726	869	968	82	480	570	1,379	809	-14.5	2.4		
	1904	46	975	46	80	849	.....	1,286	66	489	556	1,347	791	-3.6	-14.5	
	1899	43	.....	.....	50	881	.....	1,407	48	443	653	1,575	922	.....	.....
Pawtucket.....	1909	217	16,261	166	820	15,275	29,510	40,094	1,405	7,255	21,540	37,696	16,156	28.7	45.8		
	1904	183	12,950	159	737	12,054	.....	27,178	1,040	5,100	14,112	25,847	11,735	12.5	34.1	
	1899	191	.....	.....	495	10,712	.....	20,451	715	4,331	9,977	19,272	9,295	.....	.....
Providence.....	1909	1,080	51,667	1,017	4,269	46,381	56,410	118,512	5,650	24,449	64,770	120,241	55,471	16.5	30.7		
	1904	881	43,748	893	3,051	39,804	.....	95,666	3,819	19,555	49,973	91,981	42,008	3.7	16.9	
	1899	929	.....	.....	2,493	38,368	.....	79,686	3,053	16,931	42,551	78,657	36,106	.....	.....
Warwick.....	1909	49	6,694	55	168	6,471	22,041	13,368	322	2,803	5,394	10,589	5,195	5.2	50.2		
	1904	37	6,316	44	119	6,153	.....	8,253	187	2,144	3,848	7,052	3,204	12.6	17.1	
	1899	27	.....	.....	67	5,485	.....	8,318	116	1,826	2,441	6,020	3,579	.....	.....
Woonsocket.....	1909	130	11,341	96	542	10,703	23,571	27,700	768	4,908	16,762	28,218	11,456	23.4	46.5		
	1904	103	9,112	83	357	8,672	.....	15,462	456	3,550	10,579	19,261	8,682	14.2	30.6	
	1899	104	.....	.....	162	7,591	.....	13,954	256	2,854	7,169	14,745	7,576	.....	.....
South Carolina:																	
4 cities.....	1909	248	9,403	163	889	8,351	20,147	20,679	879	2,804	11,120	18,241	7,121	.....	.....
4 cities.....	1904	220	9,509	155	657	8,697	.....	15,480	646	2,457	9,035	14,488	5,453	.....	.....
4 cities.....	1899	195	.....	.....	365	7,409	.....	12,693	376	1,853	6,979	11,405	4,426	.....	.....
Charleston.....	1909	116	3,375	76	425	2,874	4,824	6,573	396	1,013	4,229	6,951	2,722	-16.7	15.7		
	1904	108	3,888	78	360	3,450	.....	5,807	338	1,054	3,748	6,007	2,259	8.3	5.1	
	1899	104	.....	.....	221	3,187	.....	5,398	206	919	3,507	5,713	2,206	.....	.....
Columbia.....	1909	55	2,788	33	233	2,522	7,784	7,705	259	927	3,578	5,872	2,294	5.4	25.6		
	1904	41	2,573	25	155	2,393	.....	4,745	176	798	2,642	4,677	2,035	14.4	49.2	
	1899	41	.....	.....	75	2,091	.....	3,879	93	519	1,848	3,134	1,286	.....	.....
Greenville.....	1909	41	1,324	29	113	1,182	2,574	1,930	98	365	1,228	2,142	914	-1.8	27.7		
	1904	36	1,303	26	73	1,204	.....	2,059	60	257	1,101	1,677	576	56.4	73.4	
	1899	22	.....	.....	36	770	.....	1,081	36	145	718	967	249	.....	.....
Spartanburg.....	1909	36	1,916	25	118	1,773	4,965	4,471	126	499	2,085	3,276	1,191	7.5	54.0		
	1904	35	1,745	26	69	1,650	.....	2,869	72	348	1,544	2,127	583	21.2	33.7	
	1899	28	.....	.....	33	1,361	.....	2,335	41	270	906	1,591	685	.....	.....
South Dakota:																	
2 cities.....	1909	120	1,367	122	273	972	1,942	3,737	255	563	2,640	4,464	1,824	.....	.....
1 city.....	1904	61	633	67	101	465	.....	1,748	93	248	1,066	1,898	832	.....	.....
1 city.....	1899	48	.....	.....	57	311	.....	927	42	152	322	884	562	.....	.....
Aberdeen.....	1909	37	430	36	99	295	540	1,132	94	178	1,011	1,575	564	.....	.....
Sioux Falls.....	1909	83	937	86	174	677	1,402	2,605	161	385	1,629	2,889	1,260	45.6	52.2		
	1904	61	633	67	101	465	.....	1,748	93	248	1,066	1,898	832	49.5	114.7	
	1899	48	.....	.....	57	311	.....	927	42	152	322	884	562	.....	.....
Tennessee:																	
5 cities.....	1909	1,099	34,404	1,259	4,909	28,236	67,157	78,542	5,514	13,191	50,057	86,787	36,730	.....	.....
5 cities.....	1904	903	29,911	817	3,001	26,093	.....	44,554	3,210	10,877	36,579	64,883	28,309	.....	.....
5 cities.....	1899	744	.....	.....	2,162	23,302	.....	35,116	2,075	8,372	27,572	47,831	20,259	.....	.....
Chattanooga.....	1909	185	7,507	125	972	6,410	17,509	16,125	1,180	2,816	8,434	16,036	7,602	-0.2	12.4		
	1904	177	7,230	130	686	6,420	.....	10,394	719	2,504	7,474	14,261	6,787	35.8	35.6	
	1899	149	.....	.....	458	4,729	.....	7,459	417	1,616	6,421	10,518	4,097	.....	.....
Jackson.....	1909	42	1,613	28	180	1,405	2,789	2,236	193	673	1,215	2,710	1,495	10.8	16.9		
	1904	42	1,421	35	118	1,268	.....	1,519	112	498	1,183	2,318	1,135	24.6	47.0	
	1899	33	.....	.....	101	1,018	.....	980	78	400	693	1,577	884	.....	.....
Knoxville.....	1909	159	3,464	141	550	2,773	6,001	5,333	552	1,078	5,101	8,149	3,048	-7.5	21.6		
	1904	138	3,420	128	293	2,999	.....	3,744	275	1,048	4,101	6,699	2,598	-28.6	8.0	
	1899	102	.....	.....	240	4,203	.....	5,036	242	1,288	3,532	6,202	2,650	.....	.....
Memphis.....	1909	329	9,937	597	1,413	7,927	21,320	26,968	1,727	4,288	17,851	30,242	12,391	7.5	50.9		
	1904	289	8,448	269	805	7,374	.....	13,296	994	3,543	11,339	20,043	8,704	11.3	40.8	
	1899	223	.....	.....	462	6,626	.....	9,767	552	2,792	7,879	14,233	6,354	.....	.....

¹ All other cities embrace: Coatsville, Duquesne, Monessen, North Braddock, Old Forge, South Sharon, and Steelton, to avoid disclosure of individual operations.

INDIVIDUAL CITIES.

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COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.		PERSONS ENGAGED IN INDUSTRY.					Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.	
STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).	Wage earners (average number).
Expressed in thousands.															
Tennessee—Contd.															
Nashville.....	1909	384	11,883	368	1,794	9,721	19,538	\$27,880	\$1,862	\$4,336	\$17,456	\$29,650	\$12,194	21.0	37.5
	1904	257	9,386	255	1,099	8,032	.....	15,601	1,110	3,224	12,482	21,587	9,085	19.4	41.0
	1899	237	.....	.....	911	6,726	.....	11,874	786	2,276	9,027	15,301	6,274	.....	.....
Texas:															
20 cities.....	1909	1,614	32,809	1,434	5,072	26,303	74,440	79,347	5,950	15,603	66,714	109,559	42,845	.....	.....
11 cities.....	1904	1,040	20,837	956	2,446	17,435	.....	39,114	9,614	31,970	56,518	24,546	.....	.....
	1899	879	.....	.....	1,450	14,647	.....	28,074	1,593	7,417	20,626	37,036	16,410	.....	.....
Austin.....	1909	163	1,014	109	151	754	2,211	2,340	148	415	1,627	2,845	1,218	17.6	81.3
	1904	62	786	65	80	641	.....	1,257	78	349	771	1,569	798	29.5	105.1
	1899	84	.....	.....	50	495	.....	595	40	243	457	765	308	.....	.....
Beaumont.....	1909	56	1,094	49	182	863	4,596	4,007	214	645	3,444	4,831	1,387	.....	.....
Brownsville.....	1909	9	79	13	15	51	414	51	13	19	46	121	75	.....	.....
Cleburne.....	1909	24	952	25	102	825	1,499	773	112	533	859	1,577	718	.....	.....
Dallas.....	1909	305	6,621	249	1,490	4,882	13,808	17,688	1,831	2,604	16,966	26,959	9,993	41.7	72.5
	1904	247	4,486	211	3,445	3,445	.....	10,891	828	1,759	9,207	15,628	6,421	21.2	64.7
	1899	177	.....	.....	500	2,842	.....	6,462	515	1,323	5,998	9,488	4,090	.....	.....
Denison.....	1909	29	935	27	75	833	2,306	1,108	70	516	593	1,314	721	14.9	6.4
	1904	25	813	24	64	725	.....	1,052	64	455	591	1,235	644	8.5	47.0
	1899	29	.....	.....	52	668	.....	1,108	36	361	379	840	461	.....	.....
El Paso.....	1909	88	2,041	66	223	1,752	3,396	4,252	275	1,093	1,496	3,637	2,141	51.3	52.9
	1904	54	1,304	42	104	1,158	.....	1,673	128	710	1,131	2,378	1,247	61.7	96.0
	1899	38	.....	.....	39	716	.....	793	50	402	539	1,213	674	.....	.....
Fort Worth.....	1909	147	2,641	133	449	2,059	6,614	7,443	484	1,285	5,266	8,661	3,395	44.7	52.8
	1904	102	1,748	99	226	1,423	.....	3,170	213	843	3,189	5,608	2,479	50.9	62.5
	1899	68	.....	.....	108	943	.....	2,153	131	565	2,147	3,488	1,341	.....	.....
Galveston.....	1909	81	1,396	77	225	1,094	3,633	4,572	298	707	4,267	6,308	2,041	43.8	110.5
	1904	67	975	60	154	761	.....	2,986	194	470	1,599	2,997	1,398	-46.5	-18.4
	1899	100	.....	.....	116	1,422	.....	4,688	147	640	2,025	3,675	1,650	.....	.....
Houston.....	1909	249	6,289	226	725	5,338	14,866	16,594	994	3,260	14,321	23,015	8,604	5.6	69.7
	1904	209	5,672	201	415	5,056	.....	8,877	532	2,892	7,617	13,564	5,947	58.6	81.0
	1899	145	.....	.....	245	3,188	.....	5,627	292	1,656	4,195	7,492	3,297	.....	.....
Laredo.....	1909	23	252	28	11	213	353	213	11	87	74	221	147	-58.6	-51.3
	1904	18	569	20	34	515	.....	221	161	196	454	258	258	38.4	37.2
	1899	14	.....	.....	9	372	.....	203	8	162	139	331	192	.....	.....
Marshall.....	1909	22	1,108	18	113	977	1,326	1,690	126	653	803	1,787	984	.....	.....
Palestine.....	1909	20	855	26	84	745	1,209	1,524	86	481	622	1,313	691	.....	.....
Paris.....	1909	45	679	33	105	541	2,489	1,381	77	247	862	1,430	568	.....	.....
San Angelo.....	1909	26	189	28	46	115	608	306	28	71	133	318	185	.....	.....
San Antonio.....	1909	194	3,013	156	652	3,105	6,908	8,629	753	1,760	6,952	13,435	6,483	26.4	81.5
	1904	141	2,911	110	344	2,457	.....	5,259	406	1,362	3,741	7,402	3,661	-8.4	23.6
	1899	113	.....	.....	190	2,683	.....	3,929	230	1,557	2,951	5,989	3,038	.....	.....
Sherman.....	1909	36	395	27	95	273	2,150	1,638	98	136	4,047	4,676	629	-11.1	77.1
	1904	39	427	46	74	307	.....	1,586	59	153	2,149	2,641	492	-2.2	80.8
	1899	31	.....	.....	53	314	.....	748	55	136	1,070	1,461	391	.....	.....
Temple.....	1909	37	483	42	75	366	1,616	916	61	215	834	1,346	512	.....	.....
Tyler.....	1909	23	555	23	48	484	769	661	51	288	537	996	450	.....	.....
Waco.....	1909	92	1,318	79	206	1,033	3,669	3,561	220	588	2,965	4,769	1,804	9.1	60.0
	1904	76	1,146	78	121	947	.....	2,142	141	440	1,779	2,980	1,201	-5.7	29.9
	1899	80	.....	.....	88	1,004	.....	1,768	94	372	1,326	2,294	968	.....	.....
Utah:															
2 cities.....	1909	313	6,867	218	1,039	5,610	9,199	15,862	1,089	3,883	8,680	17,064	8,384	.....	.....
2 cities.....	1904	255	4,621	236	596	3,789	.....	6,553	624	2,435	4,913	10,551	5,138	.....	.....
2 cities.....	1899	205	.....	.....	322	2,832	.....	4,213	250	1,532	2,656	5,821	2,865	.....	.....
Ogden.....	1909	68	1,539	58	158	1,323	2,506	2,324	174	873	2,065	3,713	1,648	30.6	48.1
	1904	63	1,183	66	104	1,013	.....	1,521	102	711	1,398	2,507	1,109	49.4	101.9
	1899	51	.....	.....	56	678	.....	857	47	355	679	1,242	563	.....	.....
Salt Lake City...	1909	245	5,328	160	881	4,287	6,693	13,538	915	3,010	6,615	13,351	6,736	54.4	77.0
	1904	192	3,438	170	492	2,776	.....	5,337	522	1,704	3,515	7,544	4,029	28.9	76.3
	1899	154	.....	.....	266	2,154	.....	3,356	233	1,177	1,977	4,279	2,302	.....	.....
Vermont:															
3 cities.....	1909	284	7,418	323	748	6,347	14,866	11,591	752	3,559	6,638	13,332	5,694	.....	.....
2 cities.....	1904	118	4,643	87	353	4,103	.....	7,304	390	1,693	4,966	8,879	3,913	.....	.....
2 cities.....	1899	139	.....	.....	336	3,728	.....	6,483	410	1,411	4,129	8,025	3,896	.....	.....
Barre.....	1909	139	2,780	219	221	2,340	4,645	2,481	236	1,814	1,108	3,852	2,744	.....	.....
Burlington.....	1909	82	2,777	53	353	2,371	8,359	5,460	355	982	4,323	6,800	2,477	3.1	7.0
	1904	67	2,580	42	238	2,300	.....	5,124	279	836	3,804	6,356	2,552	3.0	4.8
	1899	78	.....	.....	214	2,232	.....	4,502	312	767	3,294	6,066	2,772	.....	.....

MANUFACTURES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (-) denotes decrease.]

Table 5—Contd.	STATE AND CITY.	Cen- sus.	Number of estab- lish- ments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse- power.	Capital.	Salar- ies.	Wages.	Cost of materials.	Value of products.	Value added by manu- facture (value of products less cost of materials).	PER CENT OF INCREASE.										
				Total.	Pro- pri- etors and firm mem- bers.	Salaried em- ployees.	Wage earners (average number).								Wage earners (average number).										
Expressed in thousands.																									
Vermont—Continued.																									
	Rutland.....	1909	63	1,861	51	174	1,636	1,862	\$2,650	\$161	\$763	\$1,207	\$2,050	\$1,473	-9.3	6.2									
		1904	51	1,963	45	115	1,803		2,180	111	857	1,162	2,523	1,361	20.5	28.8									
		1899	61			122	1,496		1,981	98	644	835	1,959	1,124											
Virginia: ¹																									
	9 cities.....	1909	992	42,172	812	4,578	36,782	70,722	74,364	5,008	14,316	53,644	96,604	42,960											
	8 cities.....	1904	715	32,233	666	2,417	29,150		54,804	2,389	10,073	31,118	57,792	26,674											
	8 cities.....	1899	717			2,047	28,142		35,445	1,981	8,740	25,411	49,239	23,828											
Alexandria.....																									
		1909	54	1,713	52	191	1,470	3,250	4,687	222	697	2,731	4,420	1,689	13.9	102.1									
		1904	51	1,446	63	92	1,291		2,328	93	655	992	2,187	1,195	50.3	42.1									
		1899	57			94	859		1,606	73	374	670	1,539	869											
Danville.....																									
		1909	52	3,346	46	224	3,076	4,634	6,059	279	963	3,236	5,389	2,153	1.9	12.9									
		1904	34	3,177	28	131	3,018		5,119	126	811	2,769	4,775	2,009	2.9	29.3									
		1899	46			134	2,933		4,324	106	664	1,867	3,694	1,827											
Lynchburg.....																									
		1909	82	4,519	48	445	4,026	7,952	9,217	454	1,544	6,468	10,188	3,720	58.9	105.2									
		1904	55	2,793	41	218	2,534		4,258	217	789	2,883	4,965	2,082	70.4	65.8									
		1899	61			87	1,487		2,300	79	451	1,525	2,994	1,469											
Norfolk.....																									
		1909	215	5,590	194	647	4,749	20,408	10,744	636	2,041	5,482	10,841	4,859	61.8	80.2									
		1904	121	3,292	125	232	2,935		4,374	236	1,091	3,202	5,739	2,537	11.3	22.3									
		1899	140			231	2,638		4,419	187	904	2,542	4,092	2,150											
Petersburg.....																									
		1909	72	4,332	45	400	3,887	5,239	5,221	434	1,107	5,759	8,896	3,137	18.2	51.0									
		1904	72	3,631	62	281	3,288		4,562	240	866	3,794	5,891	2,097	-8.9	11.3									
		1899	77			222	3,608		3,175	208	792	3,115	5,293	2,178											
Portsmouth.....																									
		1909	31	936	26	68	842	1,777	1,233	65	307	776	1,528	752	52.8	61.7									
		1904	28	636	26	59	551		564	46	185	486	945	459	17.0	-1.6									
		1899	22			53	471		815	38	132	614	960	346											
Richmond.....																									
		1909	380	17,300	302	2,149	14,849	20,087	31,660	2,466	5,821	24,252	47,358	23,106	19.3	70.7									
		1904	300	13,795	278	1,073	12,444		30,942	1,125	4,150	13,763	27,745	13,982	-9.3	12.5									
		1899	276			1,032	13,715		16,890	1,128	4,160	11,485	24,669	13,184											
Roanoke.....																									
		1909	62	3,989	43	402	3,544	6,774	4,828	389	1,718	4,044	7,261	3,217	14.7	30.9									
		1904	54	3,483	43	331	3,089		2,657	306	1,526	3,232	5,545	2,313	27.1	2.7									
		1899	38			194	2,431		1,916	162	1,107	3,593	5,398	1,805											
Staunton.....																									
		1909	44	447	56	52	339	601	715	43	118	896	1,223	327											
Washington:																									
	8 cities.....	1909	1,630	33,595	1,363	4,707	27,525	98,287	103,525	6,024	20,091	63,432	112,004	48,572											
	5 cities.....	1904	997	17,715	880	2,004	14,831		43,564	2,139	9,932	29,795	53,281	23,486											
	5 cities.....	1899	691			1,184	10,767		19,110	1,154	5,934	19,412	32,973	13,561											
Aberdeen.....																									
		1909	43	1,651	26	116	1,509	9,582	4,560	161	995	2,172	3,590	1,418											
Bellingham.....																									
		1909	96	1,795	89	140	1,566	5,176	3,288	158	1,027	2,422	4,600	2,178	19.2	39.6									
		1904	78	1,466	55	97	1,314		2,981	107	858	1,651	3,294	1,643	-12.5	25.3									
		1899	47			51	1,502		1,719	59	549	1,553	2,629	1,076											
Everett.....																									
		1909	94	2,723	77	271	2,375	11,451	6,605	359	1,720	3,859	7,423	3,564											
North Yakima.....																									
		1909	36	723	32	89	602	1,975	2,297	105	374	950	2,175	1,225											
Seattle.....																									
		1909	751	14,014	621	2,062	11,331	37,732	46,472	2,750	8,569	28,685	50,569	21,884	77.3	99.0									
		1904	467	7,532	415	727	6,390		22,344	853	4,318	14,358	25,406	11,048	43.9	65.8									
		1899	352			623	4,440		7,682	561	2,682	8,864	15,323	6,459											
Spokane.....																									
		1909	286	5,294	263	1,042	3,989	9,295	16,434	1,333	3,098	10,243	18,880	8,637	64.3	113.8									
		1904	188	3,231	184	619	2,428		5,407	551	1,669	4,700	8,831	4,131	129.1	135.1									
		1899	84			207	1,060		2,211	195	616	2,033	3,756	1,723											
Tacoma.....																									
		1909	276	6,866	216	885	5,765	21,546	21,533	1,031	3,985	13,716	22,450	8,734	29.3	57.4									
		1904	236	5,158	195	508	4,457		11,769	565	2,906	8,157	14,264	6,107	25.5	38.5									
		1899	174			288	3,552		6,790	322	1,955	6,341	10,301	3,900											
Walla Walla.....																									
		1909	48	529	39	102	388	1,500	2,336	127	323	1,385	2,317	932	60.3	55.9									
		1904	33	328	31	55	242		1,063	63	181	929	1,486	557	13.6	54.1									
		1899	34			15	213		708	17	132	621	964	343											
West Virginia:																									
	6 cities.....	1909	435	17,451	293	1,057	15,501	49,729	34,511	1,901	8,241	27,270	46,303	19,033											
	4 cities.....	1904	361	12,900	269	944	11,687		26,108	1,035	5,923	18,651	32,083	13,432											
	4 cities.....	1899	327			669	9,830		17,885	647	4,256	13,449	23,079	9,630											
Bluefield.....																									
		1909	15	748	5	73	670	1,648	948	74	377	889	1,465	576											
Charleston.....																									
		1909	63	1,153	47	155	951	4,106	2,825	158	469	2,137	3,235	1,098	7.2	54.0									
		1904	54	1,048	42	119	887		2,228	116	403	998	2,101	1,103	29.3	66.5									
		1899	48			73	886		1,054	64	257	659	1,292	603											
Huntington.....																									
		1909	07	3,489	86	297	3,156	8,860	4,917	274	1,681	3,382	6,511	3,129	41.6	47.7									
		1904	44	2,359	24	106	2,229		2,762	95	1,033	2,676	4,407	1,731	29.8	21.0									
		1899	29			82	1,717		2,198	71	812	2,498	3,642	1,144											
Martinsburg.....																									
		1909	39	1,551	28	103	1,420	1,598	2,100	99	520	1,277	2,516	1,239											
Parkersburg.....																									
		1909	75	1,766	61	210	1,495	4,031	4,424	221	767	3,560	5,499	1,939	3.5	45.6									
		1904	68	1,652	52	156	1,444		3,310	184	694	2,488	3,778	1,290	16.7	21.8									
		1899	72			107	1,237		2,358	103	508	1,886	3,101	1,215											

¹ Does not include statistics for Newport News.

INDIVIDUAL CITIES.

COMPARATIVE SUMMARY FOR CITIES AND TOWNS HAVING 10,000 INHABITANTS OR MORE, BY STATES: 1909, 1904, AND 1899—Continued.

[See note at the head of this table. A minus sign (—) denotes decrease.]

STATE AND CITY.	Census.	Number of establishments.	PERSONS ENGAGED IN INDUSTRY.				Primary horse-power.	Capital.	Salaries.	Wages.	Cost of materials.	Value of products.	Value added by manufacture (value of products less cost of materials).	PERCENT OF INCREASE.	
			Total.	Proprietors and firm members.	Salaried employees.	Wage earners (average number).								Wage earners (average number).	Value of products.
														Expressed in thousands.	
West Virginia—Con.															
Wheeling.....	1909	176	8,744	116	819	7,809	20,486	\$19,297	\$1,075	\$4,427	\$16,025	\$27,677	\$11,052	9.6	24.2
	1904	195	7,841	151	563	7,127		17,808	660	3,793	12,489	21,797	9,398	15.1	44.6
	1899	178			407	6,190		12,275	409	2,679	8,496	15,074	6,668		
Wisconsin:															
18 cities.....	1909	3,330	131,612	2,730	15,220	113,062	226,202	385,091	17,827	58,706	206,473	364,737	158,264		
18 cities.....	1904	2,950	101,990	2,604	9,717	89,669		276,648	10,841	42,005	131,274	249,002	117,728		
18 cities.....	1899	2,700			7,189	82,056		189,583	7,610	33,402	105,994	194,672	88,678		
Appleton.....	1909	97	2,387	76	186	2,125	14,295	7,215	223	1,058	4,257	6,734	2,477	-14.5	0.9
	1904	108	2,762	109	167	2,486		6,833	197	1,217	4,026	6,673	2,647	59.3	72.8
	1899	88			108	1,561		4,635	127	642	2,357	3,861	1,504		
Ashland.....	1909	38	1,213	26	71	1,116	4,912	2,494	99	611	1,486	2,748	1,262	-18.0	-34.7
	1904	37	1,467	24	82	1,361		2,730	93	738	2,192	4,210	2,018	-24.9	16.9
	1899	41			62	1,812		3,850	83	848	1,516	3,600	2,064		
Beloit.....	1909	51	3,377	41	350	2,986	4,992	7,747	317	1,840	2,439	5,586	3,447	20.8	31.2
	1904	44	2,683	39	173	2,471		3,739	199	1,439	1,835	4,485	2,650	33.9	60.2
	1899	43			115	1,845		2,511	130	871	1,338	2,800	1,462		
Eau Claire.....	1909	75	2,830	45	261	2,524	13,695	7,551	286	1,198	2,974	5,555	2,881	27.2	62.5
	1904	73	2,216	51	180	1,985		3,023	180	551	1,799	3,602	1,803	12.9	-7.1
	1899	64			116	1,758		3,844	133	696	2,112	3,576	1,764		
Fond du Lac.....	1909	97	3,064	76	281	2,707	4,393	6,803	361	1,297	5,074	8,227	3,153	5.5	46.9
	1904	85	2,890	82	242	2,566		4,600	264	1,055	3,311	5,600	2,289	68.8	95.7
	1899	74			117	1,520		2,384	117	542	1,635	2,861	1,226		
Green Bay.....	1909	102	2,961	64	318	2,579	5,637	5,495	285	1,107	3,893	6,235	2,342	22.2	27.9
	1904	103	2,455	116	228	2,111		3,749	208	879	2,666	4,873	2,177	47.9	79.9
	1899	79			103	1,427		2,704	105	565	1,363	2,709	1,346		
Janesville.....	1909	78	1,861	56	354	1,451	3,358	4,517	370	676	2,877	5,156	2,279	7.6	34.1
	1904	73	1,612	60	204	1,348		3,445	220	600	2,056	3,846	1,790	-3.6	20.8
	1899	72			170	1,398		2,444	126	571	1,769	3,184	1,415		
Kenosha.....	1909	62	7,038	58	531	6,449	14,484	23,099	868	3,838	14,773	23,182	8,409	48.1	87.5
	1904	45	4,627	36	237	4,354		9,691	315	2,244	7,392	12,363	4,971	40.9	68.6
	1899	38			100	3,090		5,609	185	1,303	5,023	7,334	2,311		
La Crosse.....	1909	151	4,180	114	737	3,329	6,956	12,459	792	1,539	7,797	14,103	6,306	25.9	73.3
	1904	150	3,175	140	391	2,644		6,834	401	1,065	4,725	8,139	3,414	-4.3	6.0
	1899	131			299	2,763		6,369	312	1,001	4,645	7,077	3,082		
Madison.....	1909	116	2,468	189	487	1,792	2,551	5,460	533	1,059	2,337	5,467	3,190	21.4	66.1
	1904	84	1,892	74	342	1,476		5,182	341	813	1,293	3,291	1,998	8.1	22.4
	1899	69			183	1,305		3,475	159	598	1,138	2,689	1,551		
Manitowoc.....	1909	80	1,824	72	227	1,525	4,371	6,764	240	767	3,963	5,939	1,976	15.4	34.1
	1904	76	1,508	63	124	1,321		5,020	119	533	2,940	4,428	1,488	35.5	128.8
	1899	62			81	975		2,421	78	359	836	1,935	1,099		
Marinette.....	1909	43	1,618	34	93	1,491	6,470	3,284	126	701	1,703	3,309	1,606	-9.4	-8.9
	1904	37	1,753	30	78	1,645		3,284	118	862	1,581	3,633	2,052	-33.8	-17.6
	1899	45			95	2,485		4,367	136	1,014	1,714	4,411	2,697		
Milwaukee.....	1909	1,764	68,933	1,472	7,959	59,502	94,254	219,391	9,405	31,437	120,621	208,324	87,703	37.2	51.0
	1904	1,527	49,843	1,393	5,084	43,366		161,494	5,837	20,809	71,103	137,995	66,892	5.2	24.5
	1899	1,419			4,077	41,220		105,504	4,305	17,102	59,064	110,854	51,160		
Oshkosh.....	1909	159	6,494	131	585	5,778	10,890	9,611	677	2,570	7,061	14,739	7,558	19.4	70.4
	1904	134	5,284	120	324	4,840		8,058	359	2,097	4,432	4,220	4,198	14.5	7.1
	1899	129			270	4,226		7,083	255	1,628	4,282	8,061	3,799		
Racine.....	1909	142	10,354	81	1,892	8,381	12,905	36,326	2,117	4,562	11,512	24,673	13,161	28.9	49.9
	1904	148	7,837	94	1,239	6,504		26,484	1,271	3,155	7,143	16,459	9,316	6.0	41.0
	1899	135			845	6,138		16,206	638	2,712	5,926	11,676	5,750		
Sheboygan.....	1909	109	6,564	65	511	5,988	8,717	15,053	669	2,339	6,089	11,299	5,210	1.4	15.9
	1904	96	6,265	70	292	5,903		12,289	358	2,095	5,553	9,751	4,198	18.2	41.2
	1899	80			198	4,992		7,482	248	1,552	3,712	6,907	3,166		
Superior.....	1909	99	2,113	82	184	1,847	6,536	6,028	225	1,087	4,272	6,574	2,302	37.5	3.4
	1904	72	1,578	61	174	1,343		5,768	152	746	4,648	6,357	1,709	-23.9	-7.0
	1899	75			148	1,765		5,691	164	787	5,026	6,836	1,810		
Wausau.....	1909	67	2,333	48	193	2,092	6,786	5,704	224	990	3,325	6,287	2,962	7.6	35.3
	1904	58	2,143	42	166	1,945		3,615	182	807	2,549	4,645	2,096	13.3	37.4
	1899	56			102	1,716		2,774	109	611	1,908	3,381	1,473		
Wyoming:															
1 city.....	1909	22	956	12	91	853	1,253	1,670	111	618	607	1,577	970		
1 city.....	1904	18	623	11	60	552		740	66	412	308	925	617		
1 city.....	1899	17			18	423		580	17	341	289	722	453		
Cheyenne.....	1909	22	956	12	91	853	1,253	1,670	111	618	607	1,577	970	54.5	70.5
	1904	18	623	11	60	552		740	66	412	308	925	617	30.5	28.1
	1899	17			18	423		580	17	341	289	722	453		
All other cities: ¹															
5 cities.....	1909	142	18,263	170	1,762	16,331	316,446	137,485	2,044	11,391	60,319	82,537	22,218		
2 cities.....	1904	54	8,740	39	300	8,401		37,505	406	4,498	10,957	22,346	11,839		
2 cities.....	1899	71			184	6,892		19,323	288	3,622	8,606	15,272	6,666		

¹ All other cities embrace: Gary, Ind.; Great Falls, Mont.; Lackawanna, N. Y.; Lakewood, Ohio; and Newport News, Va., in 1909, and Great Falls, Mont., and Newport News, Va., in 1904 and 1899.

CHAPTER VI.

DISTRIBUTION OF MANUFACTURING INDUSTRIES AMONG COMMUNITIES CLASSIFIED ACCORDING TO SIZE.

Method and significance of the classification.—Considerable interest attaches to the subject of the relative extent to which manufacturing is carried on in larger as compared with smaller communities, and the changes in this respect from one census to another. In the statistics of population the distinction is made between urban and rural communities, incorporated places (including New England towns) of 2,500 or more inhabitants being classed as urban and the rest of the country as rural. In the census of manufactures, which does not include hand or neighborhood industries, the distinction between urban and rural as thus defined is of little significance, because cities or villages having over 2,500 inhabitants almost invariably exist or spring up wherever manufacturing establishments of any importance are located; therefore the extent to which manufacturing industries are carried on in places of less than 2,500 inhabitants or in rural districts is of necessity comparatively small. Moreover, for the sake of convenience in tabulation it is preferable to adopt a different method of classifying communities. In the tables in this chapter, therefore, a distinction is made between manufacturing establishments located, respectively, in incorporated places of 10,000 or more inhabitants and in the remainder of the country, the latter including the smaller incorporated places and the rural districts. In two of the tables the further distinction is made between cities (the term "city" being used to include any incorporated place) of 100,000 or more inhabitants, cities of 25,000 to 100,000 inhabitants, and cities of 10,000 to 25,000 inhabitants.

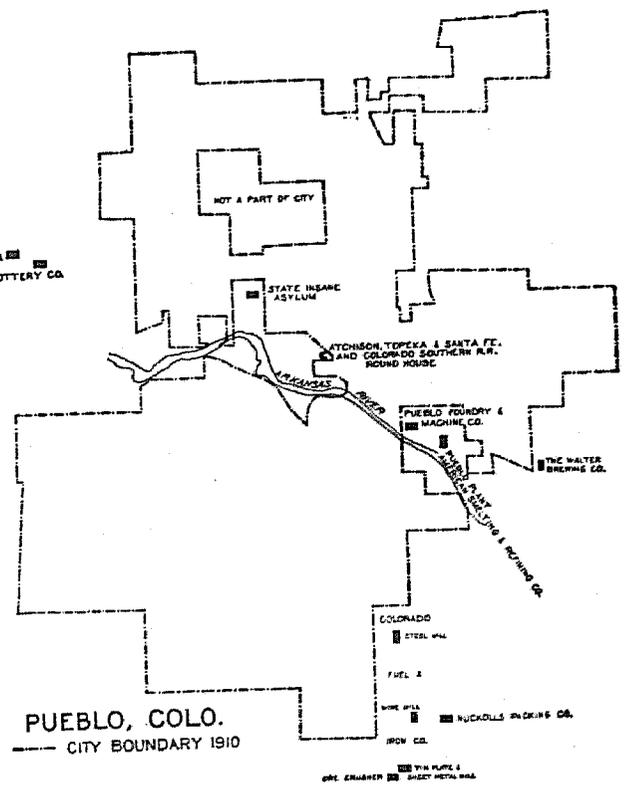
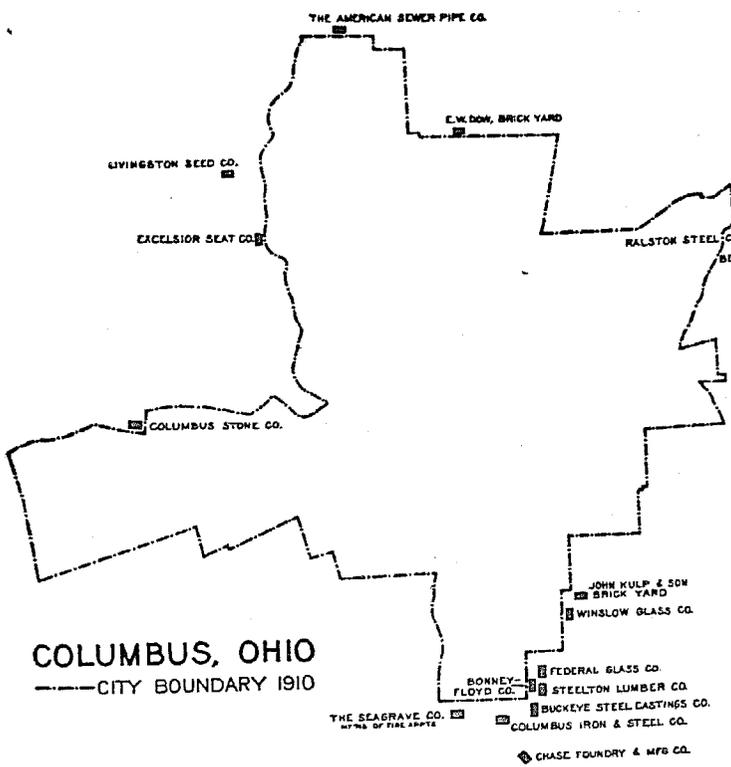
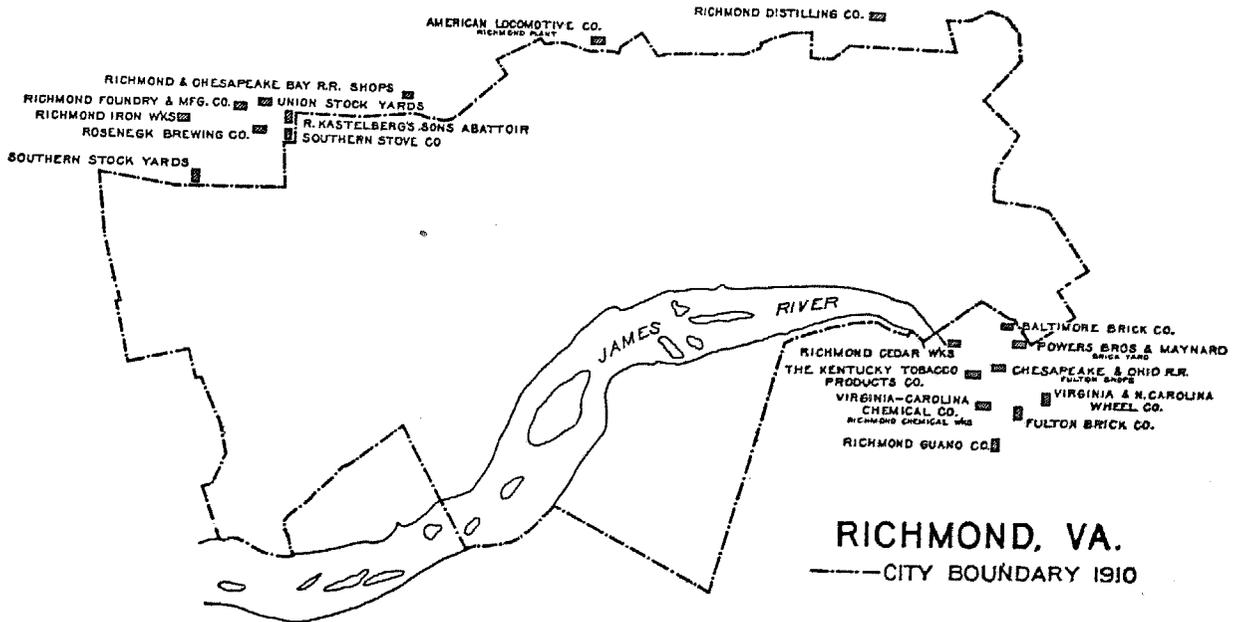
In considering the statistics presented in this chapter, it should be borne in mind that it is very common to find manufacturing establishments of considerable size located just outside of city boundaries. As a result, the proportion of the manufacturing business of the country as a whole which, in a sense, can be properly credited to places of 10,000 or more inhabitants, or to any of the separate classes of places above that size distinguished in the tables, is somewhat

greater than is shown by the statistics here presented. Many manufacturers desirous of operating with all the advantages of an urban location, such as a plentiful supply of labor, good shipping facilities, and the like, while escaping as many of its expenses and restrictions as possible, purposely build their plants just outside the city limits. The corporate limits of some cities, moreover, have been extended so as to take in important manufacturing suburbs, while the boundaries of others have remained unchanged, although important manufacturing suburbs have developed. It often happens, also, that when city limits are established or extended the boundaries are run in such a way as to leave outside certain plants which would naturally be expected to come within the city limits. It is evident, therefore, that under these conditions the statistics do not always accurately represent the importance of individual cities or classes of cities from the industrial standpoint.

The conditions referred to above are brought out by the three maps on the following page, which show the manufacturing plants on the outskirts of Richmond, Va., Columbus, Ohio, and Pueblo, Colo., respectively. In the case of each of these cities certain factories, which constitute for all practical purposes an integral part of the city's industrial activities, are nevertheless, because of the arrangement of the city boundaries, classed with the establishments located in communities of less than 10,000 inhabitants.

The exact importance of a city as a manufacturing center can not be ascertained, except by combining with the establishments actually located in the city all the neighboring manufacturing establishments identified or closely associated with its industrial development. The difficulty of determining in each case just which establishments should be so combined renders it altogether impracticable to make such a compilation of the figures for all the 593 incorporated places of more than 10,000 inhabitants, but such a combination for the most important cities will be published in a subsequent report, dealing especially with metropolitan districts.

MANUFACTURING PLANTS ON THE OUTSKIRTS OF RICHMOND, VA., COLUMBUS, OHIO, AND PUEBLO, COLO.



Manufactures in communities classified according to size, for the United States as a whole.—The distribution of the manufacturing industries of the country as a whole among communities classified according to size is shown in the following table, which gives separately for each group the population in 1910 and 1900, and the number of manufacturing establishments, average number of wage earners, value of products, and value added by manufacture, as reported for 1909 and 1899. Statistics for 1904 are not given because there was no Federal census of popula-

tion in 1905, so that it is impossible to determine precisely what cities belonged to each group.

In considering this table it should be noted that each place is classified at each census according to its population at that census, so that the same community may have been in one class in 1900 and in another class in 1910. Consequently, the difference between the totals for the two censuses can not be taken as measuring the increase in manufacturing in the same communities, and for this reason percentages of increase are not shown.

ITEM.	Year.	Aggregate.	INCORPORATED PLACES HAVING A POPULATION OF 10,000 OR OVER.								DISTRICTS OUTSIDE OF INCORPORATED PLACES HAVING A POPULATION OF 10,000 OR OVER.	
			Total.		10,000 to 25,000.		25,000 to 100,000.		100,000 and over.		Number or amount.	Per cent of aggregate.
			Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.	Number or amount.	Per cent of aggregate.		
Number of places.....	1910 1900	.....	593 436	.....	365 277	.....	178 122	.....	50 37	.....	.....	.....
Population.....	1910 1900	91,972,266 75,994,575	34,002,692 24,052,670	37.0 31.7	5,495,594 4,297,118	6.0 5.7	8,204,960 5,547,205	8.9 7.3	20,302,138 14,208,347	22.1 18.7	57,969,574 51,941,905	63.0 68.3
Number of establishments.....	1909 1899	268,491 207,514	135,772 102,918	50.6 49.6	18,936 15,463	7.1 7.5	27,061 20,147	10.1 9.7	89,775 67,308	33.4 32.4	132,719 104,596	49.4 50.4
Average number of wage earners....	1909 1899	6,615,046 4,712,763	4,316,642 3,044,439	65.3 64.6	678,467 524,900	10.3 11.1	1,126,253 767,293	17.0 16.3	2,511,922 1,752,246	38.0 37.2	2,298,404 1,668,324	34.7 35.4
Value of products.....	1909 1899	\$20,672,051,870 11,406,926,701	\$14,264,878,807 7,864,564,177	69.0 68.9	\$1,946,703,215 1,052,639,594	9.4 9.2	\$3,582,403,574 1,843,124,795	17.3 16.2	\$8,735,772,018 4,968,799,788	42.3 43.6	\$6,407,173,063 3,542,362,524	31.0 31.1
Value added by manufacture.....	1909 1899	8,529,260,992 4,831,075,210	6,003,005,285 3,377,477,927	70.4 68.9	801,766,297 458,679,363	9.4 9.5	1,431,652,146 773,117,708	16.8 16.0	3,769,586,842 2,145,680,856	44.2 44.4	2,526,255,707 1,453,597,283	29.6 30.1

As would naturally be expected, the percentage which the population in the places of 10,000 inhabitants or over forms of the total population of the United States is considerably smaller than any of the percentages which indicate the share of those places in the total manufacturing activities of the country. In 1909 such places, although they comprised only 37 per cent of the total population of the country, contained a little over one-half of the total number of manufacturing establishments, employed nearly two-thirds (65.3 per cent) of the wage earners engaged in manufactures, and reported about seven-tenths of the total value of products and of the value added by manufacture (69 per cent and 70.4 per cent, respectively). Places of 100,000 or more inhabitants in 1909 contributed 42.3 per cent of the total value of manufactured products; places of 25,000 to 100,000 inhabitants, 17.3 per cent; places of 10,000 to 25,000 inhabitants, 9.4 per cent; and places of less than 10,000 inhabitants and rural districts, 31 per cent.

It is noteworthy, however, that whereas places of 10,000 or more inhabitants contained a materially larger proportion of the population of the country in 1910 than they did in 1900—37 per cent as against 31.7 per cent—there was only a very slight increase in their proportions of the total number of manufacturing establishments, the wage earners in manufacturing industries, and the total value added by manufacture, and practically no change in their proportion of the total value of products. In other words, while these com-

munities, considered as a group, have perhaps a little more than held their own in relative importance in manufacturing, they have not gained in this respect commensurately with their gain in population. No very conspicuous change has taken place in the relative importance from the manufacturing standpoint of the three classes of cities of over 10,000 inhabitants distinguished in the table.

Another method of comparing the relative importance of manufacturing industries in the different classes of communities is by calculating the proportion which wage earners in manufacturing establishments form of the total population, and the average value of manufactured products per capita of the total population. Such figures, based on the returns of the manufactures census for 1909 and the population returns for 1910, are presented in the following tabular statement:

GROUP.	Per cent wage earners in manufacturing establishments represented of total population.	Value of products per capita of total population.
United States.....	7.2	\$225
Incorporated places having—		
10,000 inhabitants or over.....	12.7	420
10,000 to 25,000 inhabitants.....	12.3	354
25,000 to 100,000 inhabitants.....	13.7	437
100,000 inhabitants or over.....	12.4	430
Remainder of country.....	4.0	111

Wage earners in manufacturing industries formed 12.7 per cent, or about one-eighth, of the total population of incorporated places of 10,000 inhabitants or over, as compared with 4 per cent, or one twenty-fifth, in the remainder of the country. The average value of manufactured products per capita of the total population in incorporated places of 10,000 inhabitants or over was \$420, while outside of such places it was only \$111, or little more than one-fourth as great.

The following table shows, for the United States as a whole, the average size of establishments in cities of 10,000 or more inhabitants and in the remainder of the country, respectively, as measured by number of wage earners, value of products, and value added by manufacture:

	Year.	AVERAGE PER ESTABLISHMENT.		
		Total.	Incorporated places having a population of 10,000 or over.	Remainder of country.
Average number of wage earners.....	1909 1899	24.6 22.7	31.8 29.6	17.3 16.0
Value of products.....	1909 1899	\$76,993 54,969	\$105,065 76,416	\$48,276 33,867
Value added by manufacture.....	1909 1899	31,767 23,281	44,214 32,817	19,035 13,897

The average establishment in cities of 10,000 inhabitants or over, speaking roughly, employs almost twice as many wage earners and has an output more than twice as great in value as the average establishment outside of such cities. This is but natural, since large units of production imply correspondingly large bodies of population from which to draw their labor force.

It may be noted that there are four very important industries in which most of the establishments either serve chiefly local markets or derive their materials from widely distributed local sources. These are the bakery, flour-mill and gristmill, lumber, and printing and publishing industries. These four industries (not counting custom sawmills and gristmills) comprised 107,733 establishments in 1909, or two-fifths of the total number of establishments canvassed by the census. Of these 107,733 establishments, 70,088, or nearly two-thirds, were located outside of places of 10,000 or more inhabitants.

Manufactures in communities classified according to size, by states and geographic divisions.—Comparative statistics of manufactures for 1909 and 1899 for communities of 10,000 inhabitants or over and for the remainder of the country are given, by states and geographic divisions, in Table 4.

The Middle Atlantic division has a larger proportion of its total population and also of its manufacturing activities in cities of 10,000 inhabitants or over than any other geographic division. In that division 62.4 per cent of the population in 1910, and 75.1 per cent of the wage earners in manufacturing establishments and 76.2 per cent of the value of manufactured products in 1909, were credited to such cities. In New England and the East North Central division the proportion for such cities is also high. The distinctively Southern states, which comprise the South Atlantic, East South Central, and West South Central divisions, considered collectively, have relatively more of their population and manufacturing industries in the smaller cities and rural districts than any other section of the country.

Considering the states individually, New York had a larger proportion of its total manufacturing activities in 1909, as measured by average number of wage earners, value of products, and value added by manufacture, in cities of 10,000 or more inhabitants than any other state. In Illinois, Massachusetts, Rhode Island, and several other states a very large proportion of the manufacturing business is also done in such cities. In striking contrast to these states are Arizona, Arkansas, Idaho, Mississippi, Montana, Nevada, New Mexico, North and South Carolina, North and South Dakota, Utah, Vermont, and Wyoming, which have comparatively few places of 10,000 or more.

The relative importance of the places of 10,000 inhabitants or over in population and manufactures was greater in 1909 than in 1899 in the New England, Middle Atlantic, East North Central, and West North Central divisions, except that in the Middle Atlantic division a slightly smaller proportion of the total value of products was reported from such places in 1909 than in 1899. In the remaining geographic divisions—the South Atlantic, East South Central, West South Central, Mountain, and Pacific—the smaller cities and rural districts in general gained relatively in industrial importance during the decade, although in each case they contained a smaller proportion of the total population in 1910 than in 1900.

MANUFACTURES.

LOCATION OF MANUFACTURING INDUSTRIES—STATISTICS OF ESTABLISHMENTS CLASSIFIED AS LOCATED IN DIVISIONS AND STATES:

Table 4		DIVISION AND STATE.	Census.	POPULATION. ¹			NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.		
				Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.
1		UNITED STATES¹	1909 1899	81,872,266 75,894,575	34,002,692 24,052,670	57,869,574 51,841,905	268,491 207,514	135,772 102,918	132,719 104,596	6,615,046 4,712,763	4,316,642 3,044,439	2,298,404 1,668,324
		GEOGRAPHIC DIVISIONS.										
2		New England.....	1909 1899	6,552,681 5,592,017	4,060,032 3,128,392	2,492,649 2,463,625	25,351 22,576	14,796 12,450	10,555 10,126	1,101,290 851,903	783,674 556,287	317,616 295,616
3		Middle Atlantic.....	1909 1899	19,315,892 15,454,678	12,045,917 8,810,060	7,269,975 6,644,618	31,315 65,834	55,411 43,108	25,904 22,726	2,207,747 1,604,844	1,657,774 1,197,381	549,973 407,463
4		East North Central.....	1909 1899	18,250,621 15,985,581	7,679,935 5,575,775	10,570,686 10,409,806	60,013 50,521	32,095 24,611	27,918 25,910	1,513,764 1,073,322	1,086,745 744,421	427,019 328,901
5		West North Central.....	1909 1899	11,637,921 10,347,423	2,833,028 2,094,604	8,804,893 8,252,819	27,171 20,732	10,515 7,772	16,656 12,960	374,337 266,051	262,971 183,382	111,366 82,669
6		South Atlantic.....	1909 1899	12,194,895 10,443,480	2,302,670 1,721,999	9,892,225 8,721,481	28,088 19,144	6,999 5,396	21,089 13,748	663,015 458,844	224,284 176,042	438,731 282,302
7		East South Central.....	1909 1899	8,409,901 7,547,757	1,100,583 754,057	7,309,318 6,793,700	15,381 10,058	3,442 2,533	11,939 7,525	261,772 177,208	91,995 65,489	169,777 111,719
8		West South Central.....	1909 1899	8,784,534 6,532,290	1,315,026 695,217	7,469,508 5,837,073	12,339 7,174	3,467 1,860	8,872 5,314	204,520 113,388	58,356 35,422	146,164 77,966
9		Mountain.....	1909 1899	2,633,517 1,674,657	575,021 330,874	2,058,496 1,343,783	5,254 3,146	1,683 1,051	3,571 2,095	75,435 44,497	24,577 15,023	50,858 29,474
10		Pacific.....	1909 1899	4,192,304 2,416,692	2,009,795 907,127	2,182,509 1,509,565	13,579 8,329	7,222 4,066	6,357 4,263	213,166 123,206	109,935 64,100	103,231 59,106
		NEW ENGLAND.										
11		Maine.....	1909 1899	742,371 694,466	166,433 147,012	575,938 547,454	3,546 2,678	675 631	2,871 2,247	79,955 69,914	25,453 23,190	54,502 46,724
12		New Hampshire.....	1909 1899	430,572 411,588	174,112 124,361	256,460 287,227	1,961 1,771	604 402	1,357 1,369	78,658 67,646	44,467 30,191	34,191 37,455
13		Vermont.....	1909 1899	355,956 343,641	44,748* 30,139	311,208 313,502	1,958 1,938	284 139	1,674 1,799	33,788 28,179	6,347 3,728	27,441 24,451
14		Massachusetts.....	1909 1899	3,366,416 2,895,346	2,606,380 2,050,862	760,036 754,484	11,684 10,929	9,210 8,210	2,474 2,719	584,559 438,234	477,766 341,251	106,793 90,983
15		Rhode Island.....	1909 1899	542,610 423,556	437,627 336,437	104,983 86,119	1,951 1,678	1,656 1,358	295 320	113,538 88,197	61,142 36,718	22,396 21,479
16		Connecticut.....	1909 1899	1,114,756 998,420	630,732 445,551	484,024 462,869	4,261 3,382	2,367 1,710	1,884 1,672	210,792 159,733	138,499 91,209	72,293 68,524
		MIDDLE ATLANTIC.										
17		New York.....	1909 1899	9,113,614 7,268,894	6,756,593 4,917,781	2,357,021 2,351,113	44,935 35,957	34,436 26,467	10,499 9,490	1,003,981 726,909	856,875 605,358	147,106 121,551
18		New Jersey.....	1909 1899	2,537,167 1,833,669	1,635,863 1,125,018	901,304 758,651	8,817 6,415	5,939 4,253	2,878 2,162	326,223 213,975	248,765 160,842	77,458 53,133
19		Pennsylvania.....	1909 1899	7,665,111 6,302,115	3,653,461 2,767,261	4,011,650 3,534,854	27,563 23,462	15,036 12,388	12,527 11,074	877,543 663,960	552,134 431,181	325,409 232,779
		EAST NORTH CENTRAL.										
20		Ohio.....	1909 1899	4,767,121 4,157,545	2,130,013 1,512,007	2,637,108 2,645,538	15,138 13,868	8,765 6,990	6,373 6,878	446,934 308,109	323,359 220,141	123,575 87,968
21		Indiana.....	1909 1899	2,700,876 2,516,462	802,265 564,581	1,898,611 1,951,881	7,969 7,128	2,975 2,334	4,994 4,794	186,984 139,017	112,658 78,097	74,326 60,920
22		Illinois.....	1909 1899	6,638,591 4,821,550	2,950,963 2,218,030	2,687,628 2,603,520	18,026 14,374	12,525 9,695	5,501 4,679	465,764 332,871	379,741 279,322	86,023 53,549
23		Michigan.....	1909 1899	2,810,173 2,420,982	1,043,746 681,312	1,766,427 1,739,670	9,159 7,310	4,500 2,892	4,659 4,418	231,499 155,800	157,325 84,805	74,174 70,995
24		Wisconsin.....	1909 1899	2,333,860 2,069,042	752,948 599,845	1,580,912 1,469,197	9,721 7,841	3,330 2,700	6,391 5,141	182,583 137,525	113,662 82,056	68,921 55,469
		WEST NORTH CENTRAL.										
25		Minnesota.....	1909 1899	2,075,708 1,751,394	654,837 461,383	1,420,871 1,290,011	5,561 4,066	2,305 1,603	3,256 2,493	84,767 64,557	56,725 39,611	28,042 24,946
26		Iowa.....	1909 1899	2,224,771 2,231,853	467,198 347,355	1,757,573 1,884,498	5,528 4,828	1,987 1,417	3,541 3,411	61,635 44,420	44,845 29,798	16,790 14,622
27		Missouri.....	1909 1899	3,293,355 3,106,665	1,150,840 919,270	2,142,495 2,187,395	8,375 6,553	4,247 3,662	4,128 3,191	152,993 107,704	116,250 84,165	36,743 23,539
28		North Dakota.....	1909 1899	577,056 319,146	26,809	550,247 319,146	752 337	99	653 337	2,789 1,358	860	1,029 1,358
29		South Dakota.....	1909 1899	583,888 401,570	24,847 10,266	559,041 391,304	1,020 624	120 48	900 576	3,602 2,224	972 311	2,630 1,913
30		Nebraska.....	1909 1899	1,192,214 1,066,300	204,654 168,725	987,560 897,575	2,500 1,695	714 429	1,786 1,266	24,336 18,669	17,085 12,707	7,251 5,962
31		Kansas.....	1909 1899	1,690,949 1,470,495	303,843 187,605	1,387,106 1,282,890	3,435 2,299	1,043 613	2,392 1,686	44,215 27,119	26,234 16,790	17,981 10,329

¹ The population in 1910 was used as the basis in making the classification for 1909 as was that in 1900 for 1899.

DISTRIBUTION BY SIZE OF COMMUNITIES.

CITIES AND TOWNS OF 10,000 INHABITANTS OR MORE OR LOCATED OUTSIDE OF SUCH PLACES, BY GEOGRAPHIC 1909 AND 1899.

	VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).			PER CENT OF TOTAL.									
	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	Population.		Number of establishments.		Average number of earners.		Value of products.		Value added by manufacture.	
							In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.
1	\$20,672,051,870 11,406,926,701	\$14,264,878,807 7,864,564,177	\$6,407,173,063 3,542,362,524	\$8,529,260,992 4,831,075,210	\$6,003,005,285 3,377,477,927	\$2,526,255,707 1,463,597,283	37.0 31.7	63.0 68.3	50.6 49.6	49.4 50.4	65.3 64.6	34.7 35.4	69.0 68.9	31.0 31.1	70.4 69.9	29.6 30.1
2	2,670,065,114 1,660,348,100	1,954,650,498 1,133,861,342	715,414,616 526,486,758	1,193,768,236 750,311,120	875,435,065 519,358,469	318,333,171 236,952,651	62.0 55.9	38.0 44.1	58.4 55.1	41.6 44.9	71.2 65.3	28.8 34.7	73.2 68.3	26.8 31.7	73.2 68.7	26.7 31.3
3	7,141,761,302 4,074,718,936	5,489,468,193 3,108,121,937	1,702,293,109 966,596,999	2,982,263,573 1,763,314,384	2,330,108,430 1,361,325,293	652,155,143 401,989,091	62.4 57.0	37.6 43.0	68.1 65.5	31.9 34.5	75.1 74.0	24.9 25.4	76.2 76.3	23.8 23.7	78.1 77.2	21.9 22.8
4	5,211,702,164 2,833,055,527	3,855,851,964 2,078,936,003	1,355,850,200 774,119,524	2,177,230,169 1,205,478,817	1,644,055,475 891,632,819	533,174,694 313,845,998	42.1 34.9	57.9 65.1	53.5 48.7	46.5 51.3	71.8 69.4	28.2 30.6	74.0 72.9	26.0 27.1	75.5 74.0	24.5 25.0
5	1,803,898,560 972,988,665	1,278,313,201 682,123,164	525,585,349 290,845,501	562,043,447 325,404,099	412,336,679 236,768,517	149,706,768 88,635,582	24.3 20.2	75.7 79.8	38.7 37.5	61.3 62.5	68.9 68.9	29.8 29.8	70.9 70.1	29.1 29.9	73.4 72.8	26.6 27.2
6	1,381,186,210 711,800,355	588,934,177 339,463,165	792,252,033 376,337,190	591,181,848 316,114,105	265,241,896 152,061,761	325,939,952 164,052,244	18.9 16.5	81.1 83.5	24.9 28.2	75.1 71.8	33.8 38.4	66.2 61.6	42.6 47.1	57.4 52.9	44.9 48.1	55.1 51.9
7	630,488,093 325,086,235	281,901,777 150,041,889	348,586,316 175,044,346	294,324,842 148,579,732	123,902,553 70,138,922	170,422,289 78,440,810	13.1 10.0	86.9 90.0	22.4 25.2	77.6 74.8	35.1 37.0	64.9 63.0	44.7 46.2	55.3 53.8	42.1 47.2	57.9 52.8
8	625,443,045 252,313,866	236,138,404 104,570,711	389,304,641 147,743,155	243,311,949 98,803,134	92,598,246 38,198,863	150,713,703 60,604,271	15.0 10.6	85.0 89.4	28.1 25.9	71.9 74.1	28.5 31.2	71.5 68.5	37.8 41.4	62.2 58.6	38.1 38.7	61.9 61.3
9	363,995,598 191,825,437	91,158,726 55,050,897	272,836,872 136,774,540	135,303,366 76,220,285	40,793,339 20,467,933	94,510,027 55,752,352	21.8 19.8	78.2 80.2	32.0 33.4	68.0 66.6	32.6 33.8	67.4 68.2	25.0 28.7	71.3 71.3	26.9 26.9	73.1 73.1
10	843,511,794 644,809,580	455,924,179 201,122,871	387,587,615 163,686,709	349,833,562 140,849,534	196,317,328 80,859,415	153,516,234 59,990,119	47.9 37.5	52.1 62.5	53.2 48.8	46.8 51.2	51.6 52.0	48.4 48.0	54.1 55.1	45.9 44.9	56.1 57.4	43.9 42.6
11	176,029,393 112,959,098	51,466,847 36,896,611	124,562,546 76,062,487	78,928,169 51,748,771	23,393,234 17,567,395	55,534,935 34,181,376	22.4 21.2	77.6 78.8	19.0 21.9	81.0 78.1	31.8 33.2	68.2 66.8	29.2 32.7	70.5 67.3	29.6 33.9	70.4 66.1
12	164,881,019 107,690,803	93,054,154 48,336,336	71,526,865 59,254,467	66,424,003 47,427,423	36,531,230 21,171,813	29,892,773 26,255,610	40.4 30.2	59.6 69.8	30.8 22.7	69.2 77.3	56.5 44.6	43.5 55.4	56.5 44.9	43.5 55.1	55.0 44.6	45.0 55.4
13	68,309,824 51,616,228	13,332,195 8,025,240	54,977,629 43,489,988	33,487,096 25,130,416	6,093,974 3,895,818	26,793,122 21,234,598	12.6 8.8	87.4 91.2	14.5 7.2	85.5 92.8	18.8 13.2	81.2 86.8	19.5 15.6	80.5 84.4	20.0 15.5	80.0 84.5
14	1,490,529,386 907,626,439	1,236,269,442 715,626,978	254,259,944 191,999,461	659,764,443 408,971,406	548,852,996 326,156,070	110,911,447 82,815,336	77.4 73.1	22.6 26.9	78.8 75.1	21.2 24.9	81.7 77.9	18.3 22.1	82.9 78.8	17.1 21.2	83.2 79.8	16.8 20.2
15	280,343,797 165,550,382	226,191,505 131,529,623	54,152,292 34,020,759	122,152,223 77,598,602	101,209,421 61,111,305	20,942,802 16,487,297	80.7 77.1	19.3 22.9	84.9 80.9	15.1 19.1	80.3 75.6	19.7 24.4	80.7 79.4	19.3 20.6	82.9 78.8	17.1 21.2
16	490,271,695 315,106,150	334,336,355 193,446,554	155,935,340 121,659,596	233,012,302 145,434,502	158,754,210 89,456,068	74,258,992 59,778,434	56.6 49.1	43.4 50.9	55.7 50.6	44.3 49.4	65.7 57.1	34.3 42.9	68.2 61.4	31.8 38.6	68.1 61.5	31.9 38.5
17	3,369,490,192 1,871,830,872	2,925,071,637 1,613,789,932	444,418,555 258,040,970	1,512,585,850 853,453,686	1,338,083,963 743,566,680	174,501,857 109,887,006	74.1 67.7	25.9 32.3	76.6 73.6	23.4 26.4	85.3 83.3	14.7 16.7	86.8 86.2	13.2 13.8	88.5 87.1	11.5 12.9
18	1,145,529,076 553,005,684	851,498,583 419,801,662	294,030,493 133,204,022	425,495,077 218,279,590	325,638,307 166,024,706	99,857,370 62,254,884	64.5 59.7	35.5 40.3	67.4 66.3	32.6 33.7	76.3 75.2	23.7 24.8	74.3 75.9	25.7 24.1	76.5 76.1	23.5 23.9
19	2,626,742,034 1,649,882,380	1,662,897,973 1,074,530,373	963,844,061 575,352,007	1,044,182,064 691,581,108	668,386,130 451,733,907	377,795,916 239,847,201	47.7 43.9	52.3 56.1	54.6 52.8	45.4 47.2	62.9 64.9	37.1 35.1	63.3 65.1	36.7 34.9	63.8 65.3	36.2 34.7
20	1,437,935,817 748,670,855	1,077,616,658 540,823,420	360,319,159 207,847,435	613,733,870 339,368,354	470,315,914 251,523,607	143,417,956 87,844,747	44.7 36.4	55.3 63.6	51.9 50.4	42.1 49.6	72.4 71.4	27.6 28.6	74.9 72.2	25.1 27.8	76.6 74.1	23.4 25.9
21	579,075,046 337,071,630	348,759,733 208,226,871	230,315,313 128,844,759	244,700,293 141,909,064	148,609,815 88,116,611	96,090,478 53,792,453	29.7 22.4	70.3 77.6	37.3 32.7	62.7 67.3	60.3 56.2	39.7 43.8	60.2 61.8	39.8 38.2	60.7 62.1	39.3 37.9
22	1,919,276,594 1,120,868,308	1,595,135,686 957,089,720	324,140,908 163,778,588	758,349,904 439,418,186	639,383,749 378,306,775	118,966,155 61,111,411	52.3 46.0	47.7 54.0	69.5 67.4	30.5 32.6	81.5 83.9	18.5 16.1	83.1 83.9	16.9 14.6	84.3 86.1	15.7 13.9
23	685,109,169 319,691,856	469,603,103 178,124,393	215,506,066 141,567,463	316,497,147 143,725,728	85,008,397 58,008,397	89,015,007 86,717,331	37.1 28.1	62.9 71.9	49.1 39.6	50.9 60.4	68.0 54.4	32.0 45.6	68.5 55.7	31.5 44.3	71.9 59.1	28.1 40.9
24	590,305,538 326,752,878	364,736,784 194,671,599	225,568,754 132,081,279	243,948,955 141,057,485	158,263,857 88,677,429	85,685,098 52,380,956	32.3 29.0	67.7 71.0	34.3 34.4	65.7 65.6	62.3 59.7	37.7 40.3	61.8 59.6	38.2 38.2	64.9 62.9	35.1 37.1
25	409,419,621 223,692,922	262,000,908 141,976,434	147,418,713 81,716,488	127,797,334 73,393,645	89,653,460 47,069,324	38,143,574 26,304,821	31.5 26.3	68.5 73.7	41.4 39.1	58.6 60.9	66.9 61.4	33.1 38.6	64.0 63.5	36.0 36.5	70.2 64.2	29.8 35.8
26	259,237,637 132,870,865	189,270,682 89,630,645	69,966,955 34,240,220	88,530,589 47,091,998	63,114,904 31,784,431	25,415,685 15,307,567	21.0 15.6	79.0 84.4	35.9 29.3	64.1 70.6	72.8 67.1	27.2 32.9	73.0 67.5	27.0 32.5	71.3 67.5	28.7 32.5
27	574,111,070 316,304,095	427,078,288 238,424,508	147,082,782 77,879,587	219,699,919 132,115,065	180,678,818 111,156,471	39,021,101 20,958,594	34.9 29.6	65.1 70.4	50.7 48.6	49.3 48.6	76.0 75.1	21.9 21.9	73.4 73.4	24.6 24.6	84.1 84.1	15.9 15.9
28	19,137,506 6,259,840	4,386,907	14,750,599 2,108,989	5,463,916 2,108,989	1,726,061	3,737,855 2,108,980	4.6	95.4	13.2	86.8	30.8	69.2	22.9	77.1	31.6	68.4
29	17,870,135 9,529,946	4,464,069 883,624	13,406,066 8,646,322	6,393,785 3,046,269	1,823,764 562,066	4,570,021 2,484,173	4.3 2.6	95.7 97.4	11.8 7.7	88.2 92.3	27.0 14.0	73.0 86.0	25.0 9.3	75.0 90.7	28.5 18.5	71.5 81.5
30	199,018,579 130,302,453	162,137,395 110,346,627	36,881,184 19,955,826	47,937,608 34,377,275	36,174,579 27,804,848	11,763,029 6,572,427	17.2 15.8	82.8 84.2	28.6 25.3	71.4 74.7	70.2 68.1	29.8 31.9	81.5 84.7	18.5 15.3	75.5 80.9	24.5 19.1
31	325,104,002 154,008,544	228,974,952 100,881,326	96,129,050 53,147,218	66,220,296 33,270,867	39,165,093 18,371,347	27,055,203 14,899,520	18.0 12.8	82.0 87.2	30.4 26.7	69.5 73.3	59.3 61.9	40.7 38.1	70.4 65.6	29.6 34.5	59.1 55.2	40.9 44.8

* Includes for 1909 statistics for Gary, Ind.; Great Falls, Mont.; Lackawanna, N. Y.; Lakewood, Ohio; and Newport News, Va. and for 1899 statistics for Great Falls, Mont., and Newport News, Va., which are omitted from the city totals for the geographic division or state in which the cities in question are located in order not to disclose the operations of individual establishments.

MANUFACTURES.

LOCATION OF MANUFACTURING INDUSTRIES—STATISTICS OF ESTABLISHMENTS CLASSIFIED AS LOCATED IN DIVISIONS AND STATES:

Table 4—Continued.		Census.	POPULATION. ¹			NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.		
DIVISION AND STATE.			Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.
SOUTH ATLANTIC.											
1	Delaware.....	1909 1899	202,322 184,735	87,411 76,508	114,911 108,227	726 633	261 262	465 371	21,238 20,562	14,663 14,498	6,575 6,064
2	Maryland.....	1909 1899	1,295,346 1,188,044	607,242 539,676	688,104 648,368	4,837 3,886	2,704 2,410	2,133 1,476	107,921 94,170	76,124 69,729	31,797 24,441
3	District of Columbia.....	1909 1899	331,069 278,718	331,069 278,718	..... .....	518 491	518 491	..... .....	7,707 6,155	7,707.....	..........
4	Virginia.....	1909 1899	2,061,612 1,854,184	351,718 252,060	1,699,894 1,602,124	5,685 3,186	992 717	4,693 2,469	105,676 66,223	36,782 28,142	68,894 38,081
5	West Virginia.....	1909 1899	1,221,119 958,800	135,526 73,603	1,085,593 885,197	2,586 1,824	435 327	2,151 1,497	63,893 33,080	15,501 9,830	48,392 23,250
6	North Carolina.....	1909 1899	2,206,287 1,893,810	149,045 87,447	2,057,242 1,806,363	4,931 3,465	453 256	4,478 3,209	121,473 72,322	18,797 9,264	102,676 63,058
7	South Carolina.....	1909 1899	1,515,400 1,340,316	118,410 100,170	1,396,990 1,240,146	1,854 1,389	248 195	1,606 1,174	73,046 47,025	8,351 7,409	64,695 39,616
8	Georgia.....	1909 1899	2,609,121 2,216,331	373,841 234,688	2,235,280 1,981,643	4,792 3,015	943 509	3,849 2,506	104,588 83,336	31,983 23,471	72,605 59,865
9	Florida.....	1909 1899	752,619 528,542	138,408 79,129	614,211 449,413	2,159 1,275	445 229	1,714 1,046	57,473 35,471	14,376 7,544	43,097 27,927
EAST SOUTH CENTRAL.											
10	Kentucky.....	1909 1899	2,289,905 2,147,174	403,294 345,246	1,886,611 1,801,928	4,776 3,648	1,562 1,433	3,214 2,215	65,400 51,735	39,931 32,329	25,469 19,406
11	Tennessee.....	1909 1899	2,184,789 2,020,616	338,198 260,487	1,846,591 1,760,129	4,609 3,116	1,099 744	3,510 2,372	73,840 45,963	28,236 23,302	45,604 22,661
12	Alabama.....	1909 1899	2,138,093 1,828,697	270,206 107,230	1,867,887 1,721,467	3,398 2,000	579 274	2,819 1,726	72,148 52,711	19,227 7,389	52,921 45,322
13	Mississippi.....	1909 1899	1,797,114 1,551,270	88,885 41,094	1,708,229 1,510,176	2,598 1,294	202 82	2,396 1,212	50,384 26,799	4,601 2,469	45,783 24,330
WEST SOUTH CENTRAL.											
14	Arkansas.....	1909 1899	1,574,449 1,311,564	110,590 61,390	1,463,859 1,250,174	2,925 1,746	339 165	2,586 1,581	44,682 31,525	7,082 3,064	37,600 28,461
15	Louisiana.....	1909 1899	1,656,388 1,381,625	414,858 314,386	1,241,530 1,067,239	2,516 1,826	1,028 747	1,488 1,079	76,165 40,878	20,587 17,250	55,578 23,628
16	Oklahoma.....	1909 1899	1,657,155 790,391	168,866 20,043	1,488,289 770,348	2,310 495	486 69	1,824 426	13,143 2,381	4,384 461	8,759 1,920
17	Texas.....	1909 1899	3,896,542 3,048,710	620,712 299,396	3,275,830 2,749,312	4,588 3,107	1,614 879	2,974 2,228	70,230 38,604	26,303 14,647	43,927 23,957
MOUNTAIN.											
18	Montana.....	1909 1899	376,053 243,329	84,714 41,240	291,339 202,089	677 395	186 83	491 312	11,655 9,854	1,833 675	9,822 9,179
19	Idaho.....	1909 1899	325,594 161,772	17,358	308,236 161,772	725 287	50	675 287	8,220 1,552	411	7,809 1,552
20	Wyoming.....	1909 1899	145,965 92,531	11,320 14,087	134,645 78,444	268 139	22 17	246 122	2,867 2,060	853 423	2,014 1,637
21	Colorado.....	1909 1899	799,024 539,700	297,058 205,703	501,966 333,997	2,034 1,223	949 746	1,085 577	28,067 19,498	14,114 11,093	13,953 8,405
22	New Mexico.....	1909 1899	327,301 195,310	11,020	316,281 195,310	313 174	31	282 174	4,143 2,490	587	3,556 2,490
23	Arizona.....	1909 1899	294,354 122,931	24,327	180,027 122,931	311 154	92	219 154	6,441 3,126	859	5,582 3,126
24	Utah.....	1909 1899	373,351 276,749	118,357 69,844	254,994 206,905	749 575	313 205	436 370	11,785 5,413	5,610 2,832	6,175 2,581
25	Nevada.....	1909 1899	81,875 42,335	10,867	71,008 42,335	177 99	40	137 99	2,257 504	310	1,947 504
PACIFIC.											
26	Washington.....	1909 1899	1,141,990 518,103	521,557 176,344	620,433 341,759	3,674 1,926	1,630 691	2,044 1,235	69,120 31,523	27,525 10,767	41,595 20,756
27	Oregon.....	1909 1899	672,765 413,536	221,308 90,426	451,457 323,110	2,246 1,406	711 408	1,535 998	28,750 14,459	12,811 5,380	15,939 9,079
28	California.....	1909 1899	2,377,549 1,485,053	1,266,930 640,357	1,110,619 844,696	7,659 4,997	4,881 2,967	2,778 2,030	115,296 77,224	69,599 47,953	45,697 29,271

¹ The population in 1910 was used as the basis in making the classification for 1909 as was that in 1900 for 1899.

DISTRIBUTION BY SIZE OF COMMUNITIES.

CITIES AND TOWNS OF 10,000 INHABITANTS OR MORE OR LOCATED OUTSIDE OF SUCH PLACES, BY GEOGRAPHIC 1909 AND 1899—Continued.

	VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE (VALUE OF PRODUCTS LESS COST OF MATERIALS).			PER CENT OF TOTAL IN CITIES AND ELSEWHERE.									
	Total.	In cities of 10,000 or over.	Elsewhere.	Total.	In cities of 10,000 or over.	Elsewhere.	Population.		Number of establishments.		Average number of wage earners.		Value of products.		Value added by manufacture.	
							In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.	In cities of 10,000 or over.	Elsewhere.		
1	\$52,839,619 41,321,061	\$38,069,383 30,586,810	\$14,770,236 10,734,251	\$21,901,815 16,595,744	\$16,093,083 12,710,975	\$5,808,735 3,884,769	43.2 41.4	56.8 58.6	36.0 41.4	64.0 58.6	69.0 70.5	31.0 29.5	72.0 74.0	28.0 26.0	73.5 76.6	26.5 23.4
2	315,669,150 211,076,143	197,619,972 139,828,392	118,049,178 71,247,751	116,620,245 81,721,731	84,047,316 61,831,896	32,572,929 19,889,835	46.9 45.4	53.1 54.6	55.9 62.0	44.1 38.0	70.5 74.0	29.5 26.0	62.6 66.2	37.4 33.8	72.1 75.7	27.9 24.3
3	25,289,136 16,426,408	25,289,136 16,426,408	-----	15,042,602 8,951,192	15,042,602 8,951,192	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
4	219,793,858 108,644,150	96,603,688 49,239,397	123,190,170 59,404,763	94,211,171 49,284,666	42,959,849 23,827,644	51,251,322 25,457,022	17.5 13.6	82.5 86.4	17.4 22.5	82.6 77.5	34.8 42.5	65.2 57.5	44.0 45.3	56.0 54.7	45.6 48.3	54.4 51.7
5	161,949,526 67,006,822	46,302,723 23,079,313	115,646,803 43,927,509	69,071,538 29,778,569	19,032,710 9,630,783	50,038,828 20,147,786	11.1 7.7	88.9 92.3	16.8 17.9	83.2 82.1	24.3 29.7	75.7 70.3	28.6 34.4	71.4 66.6	27.6 32.3	72.4 67.7
6	216,656,055 85,274,083	61,171,160 14,530,673	155,484,895 70,743,410	94,794,525 40,419,859	31,354,345 7,139,230	63,440,180 33,280,629	6.8 4.0	93.2 95.4	9.2 7.4	90.8 92.6	15.5 12.8	84.5 87.2	28.2 17.0	71.8 83.0	33.1 17.7	66.9 82.3
7	113,235,945 53,335,811	18,240,484 11,404,995	94,995,461 41,930,816	46,885,071 22,849,950	7,120,347 4,425,966	39,764,724 18,423,984	7.8 7.5	92.2 92.5	13.4 14.2	86.6 85.8	11.4 15.8	88.6 84.2	16.1 21.4	83.9 78.6	15.2 19.4	84.8 80.6
8	202,863,262 94,532,368	75,334,309 37,344,230	127,528,953 57,188,138	85,893,498 45,176,072	33,256,700 16,425,644	52,636,798 28,760,428	14.3 10.6	85.7 89.4	19.7 16.9	80.3 83.1	30.6 28.2	69.4 71.8	37.1 39.5	62.9 60.5	38.7 36.4	61.3 63.6
9	72,889,659 34,183,509	30,303,322 13,022,947	42,586,337 21,160,562	46,761,380 21,836,322	16,334,944 7,118,431	30,426,436 14,217,891	18.4 15.0	81.6 85.0	20.6 20.6	79.4 82.0	25.0 21.3	75.0 78.7	41.6 38.1	58.4 61.9	34.9 33.4	65.1 66.6
10	223,754,497 126,508,660	133,824,503 82,774,847	89,929,994 43,733,813	111,975,180 59,102,458	62,321,114 40,091,739	49,654,066 19,010,719	17.6 16.1	82.4 83.9	32.7 39.3	67.3 60.7	61.1 62.5	38.9 37.5	59.8 65.4	40.2 34.6	55.7 67.8	44.3 32.2
11	180,216,548 92,749,129	86,786,821 47,831,174	93,429,727 44,917,955	76,200,714 38,190,090	36,729,504 20,259,432	39,471,210 17,930,658	15.5 12.9	84.5 87.1	23.8 23.9	76.2 76.1	38.2 50.7	61.8 49.3	48.2 51.6	51.8 48.4	48.2 53.0	51.8 47.0
12	145,961,638 72,109,929	49,345,723 15,028,755	96,615,915 57,081,174	62,519,120 34,111,696	19,811,080 7,792,138	42,707,440 26,319,558	12.6 5.9	87.4 94.1	17.0 13.7	83.0 80.3	26.6 14.0	73.4 86.0	33.8 20.8	66.2 79.2	31.7 22.8	68.3 77.2
13	80,555,410 33,718,517	11,944,730 4,407,113	68,610,680 29,311,404	43,629,828 17,175,488	5,040,255 1,995,613	38,589,573 15,179,875	4.9 2.6	95.1 97.4	7.8 6.3	92.2 93.7	9.1 9.2	90.9 90.8	14.8 13.1	85.2 86.9	11.6 11.6	88.4 88.4
14	74,916,367 39,887,578	18,093,769 6,320,887	56,222,598 33,566,691	39,981,455 21,599,533	8,331,722 3,102,228	31,649,733 18,497,305	7.0 4.7	93.0 95.3	11.6 9.5	88.4 90.5	15.7 9.7	84.3 90.3	25.0 15.8	75.0 84.2	20.8 14.4	79.2 85.6
15	223,948,638 111,397,919	87,880,248 59,719,597	136,068,390 51,678,322	89,083,863 35,993,982	34,311,474 17,947,449	54,772,389 17,947,449	25.0 22.8	75.0 77.2	40.9 40.9	59.1 59.1	27.0 42.2	73.0 57.8	39.2 53.6	60.8 46.4	38.5 50.1	61.5 49.9
16	53,682,405 8,133,936	20,005,330 1,403,998	33,677,075 6,639,938	19,529,511 2,708,489	7,110,080 639,800	12,419,431 2,063,629	10.2 2.5	89.8 97.5	21.0 13.9	79.0 86.1	33.4 19.4	66.6 80.6	37.3 18.4	62.7 81.6	36.4 23.7	63.6 76.3
17	272,895,635 92,894,433	109,559,057 37,036,229	163,336,578 55,858,204	94,717,120 38,506,130	42,844,970 16,410,242	51,872,150 22,095,838	15.9 9.8	84.1 90.2	35.2 28.3	64.8 71.7	37.5 37.9	62.5 62.1	40.1 39.0	59.9 60.1	45.2 42.6	54.8 57.4
18	73,271,793 52,744,997	6,772,158 2,292,687	66,499,635 50,452,310	24,091,554 22,676,896	4,035,122 1,178,987	20,056,432 21,497,909	22.5 16.9	77.5 83.1	27.5 21.0	72.5 79.0	15.7 6.9	84.3 93.1	9.2 4.3	90.8 95.7	16.7 5.2	83.3 94.8
19	22,399,860 3,001,442	1,660,497	20,739,363 3,001,442	12,479,843 1,562,574	765,909	11,713,934 1,562,574	5.3	94.7	6.9	93.1	5.0	95.0	7.4	92.6	6.1	93.9
20	6,249,078 3,268,555	1,577,023 722,457	4,672,055 2,546,098	3,640,889 1,898,825	969,949 433,909	2,670,940 1,464,916	7.8 15.2	92.2 84.8	8.2 12.2	91.8 87.8	29.8 20.5	70.2 79.5	25.2 22.1	74.8 77.9	26.6 22.9	73.4 77.1
21	130,044,312 89,067,879	57,430,448 46,514,613	72,613,864 42,553,266	49,553,408 28,317,095	23,872,383 15,989,943	25,681,025 12,327,152	37.2 38.1	62.8 61.9	46.7 56.4	53.3 43.6	50.3 56.9	49.7 43.1	44.2 52.2	55.8 47.8	48.2 56.5	51.8 43.5
22	7,897,756 4,060,924	1,288,349	6,609,407 4,060,924	4,636,713 2,062,331	704,525	3,932,188 2,062,331	3.4	96.6	9.9	90.1	14.2	85.8	16.3	83.7	15.2	84.8
23	50,256,694 20,438,987	3,503,762	46,752,932 20,438,987	16,656,454 12,562,445	1,370,224	15,286,230 12,562,445	11.9	88.1	29.6	70.4	13.3	86.7	7.0	93.0	8.2	91.8
24	61,989,277 17,981,648	17,064,204 5,521,140	44,925,073 12,460,508	20,723,616 6,541,398	3,883,756 2,865,094	12,339,860 3,676,304	31.7 25.2	68.3 74.8	41.8 35.7	58.2 64.3	47.6 52.3	52.4 47.7	27.5 30.7	72.5 69.3	40.5 43.8	59.5 56.2
25	11,886,828 1,261,005	1,862,285	10,024,543 1,261,005	3,520,889 598,721	691,471	2,829,418 598,721	13.3	86.7	22.6	77.4	13.7	86.3	15.7	84.3	19.6	80.4
26	220,746,421 70,831,345	112,003,902 32,973,483	108,742,519 37,857,862	102,853,733 32,554,401	48,572,236 13,561,487	54,286,497 18,992,914	45.7 34.0	54.3 66.0	44.4 35.9	55.6 64.1	39.8 34.2	60.2 65.8	50.7 46.6	49.3 53.4	47.2 41.7	52.8 58.3
27	93,004,845 36,592,714	49,068,798 16,903,707	43,936,047 19,689,007	42,452,375 15,803,881	21,815,981 6,729,379	20,636,394 9,077,502	32.9 21.9	67.1 78.1	31.7 29.0	68.3 71.0	44.6 37.2	55.4 62.8	52.8 46.2	47.2 53.8	51.4 42.6	48.6 57.4
28	529,760,528 257,385,521	294,851,479 151,245,681	234,909,049 106,139,840	204,522,454 92,491,252	125,929,111 60,571,549	78,593,343 31,919,703	53.3 43.1	46.7 56.9	63.7 59.4	36.3 40.6	60.4 62.1	39.6 37.9	55.7 58.8	44.3 41.2	61.6 65.5	38.4 34.5

CHAPTER VII.

LOCAL CONCENTRATION OF CERTAIN INDUSTRIES.

Statistics showing local concentration of selected industries.—The statistics already presented in Chapter IV (Table 7), showing the three leading states in each of the manufacturing industries distinguished by the Bureau of the Census, and those presented in Chapter V, showing the six leading cities in certain selected industries, bring out the fact that there is much more local concentration in some industries than in others. This condition, however, may be set forth more clearly by selecting from among the large number of industries those which are of importance and which also show a marked degree of concentration, and indicating what proportion of the total value of products of each industry was reported from the states and cities which lead in that industry. The following table presents statistics for 50 selected industries of this character. It may be noted that, in order to bring out fully the tendency toward concentration, data are shown in a few cases for separate subdivisions

of the broader classifications used in most of the tables of this report. So far as figures can be shown without the disclosure of individual operations, the table names the states, and in most cases also the cities, in which each industry is markedly concentrated, and shows for each state or city the value of products reported for 1909 and 1904 and the proportion which that value represented of the United States total. In some cases important states and cities have been omitted because the figures could not be given. Cities are not named in connection with some industries because there is no significant concentration in cities.

The figures for individual states presented in this table are in some cases less significant than those for the cities, since the importance of a state as a whole in a given industry may be due merely to the prominence of one or two localities, and may not indicate any widespread development of the industry throughout the state.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION.

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.			
	1909	1904		Amount.		Per cent of United States total.			Amount.	Per cent of United States total.		
				1909	1904	1909	1904			1909	1904	
Agricultural implements...	\$146,329,268	\$112,007,344	Illinois.....	\$57,268,325	\$38,412,452	39.1	34.3	Moline, Ill.....	\$11,493,184	\$8,347,014	7.9	7.5
			New York.....	14,970,980	13,045,891	10.2	11.6	Racine, Wis.....	7,174,690	5,177,070	4.9	4.6
			Ohio.....	14,440,481	12,891,197	9.9	11.5	Springfield, Ohio.....	5,442,397	4,051,167	3.7	3.6
			Indiana.....	13,669,824	8,060,575	9.3	7.2					
			Wisconsin.....	11,411,303	10,078,760	7.8	9.0					
			Michigan.....	9,272,787	8,719,719	6.3	7.8					
Artificial flowers and feathers and plumes.	23,980,567	5,246,822	New York.....	21,162,385	3,996,903	88.2	76.2	New York, N. Y.....	21,098,228	3,965,753	88.0	75.6
			Philadelphia, Pa.....	1,313,901	721,940	5.5	13.8					
Automobiles, including bodies and parts.	249,202,075	30,033,536	Michigan.....	96,651,451	7,996,534	38.8	26.6	Detroit, Mich.....	59,536,154	6,240,051	23.9	20.8
			Ohio.....	38,838,754	6,358,184	15.6	21.2	Cleveland, Ohio.....	21,403,926	4,624,080	8.6	15.4
			New York.....	30,979,527	4,280,164	12.4	14.2	Flint, Mich.....	16,841,688	(¹)	6.8	
			Indiana.....	23,764,070	1,638,602	9.5	5.5	Buffalo, N. Y.....	9,597,783	*1,385,509	3.9	*4.6
								Lansing, Mich.....	8,508,316	(¹)	3.4	
								New York, N. Y.....	6,194,354	1,399,484	2.5	4.7
Boots and shoes, including cut stock and findings.	512,797,642	357,688,160	Massachusetts.....	236,342,915	173,679,628	46.1	48.6	Lynn, Mass.....	46,659,709	35,430,532	9.1	9.9
			Missouri.....	48,751,235	*23,540,943	9.5	*6.7	Brockton, Mass.....	39,293,118	38,853,128	7.7	9.5
			New York.....	48,185,914	37,521,068	9.4	10.5	St. Louis, Mo.....	33,970,372	19,062,388	6.6	5.5
			New Hampshire.....	39,439,544	22,834,259	7.7	6.4	Haverhill, Mass.....	29,149,909	20,508,825	5.7	5.7
			Ohio.....	31,550,957	25,735,005	6.2	7.2	Boston, Mass.....	28,146,755	*11,413,510	5.1	*3.2
								New York, N. Y.....	18,376,429	13,688,605	3.6	3.8
								Manchester, N. H.....	17,646,652	*6,567,903	3.4	*1.8
								Cincinnati, Ohio.....	14,998,672	11,152,013	2.9	3.1
								Rochester, N. Y.....	13,450,155	9,154,944	2.6	2.6
Boots and shoes, rubber...	49,720,507	70,065,296	Massachusetts.....	18,722,363	39,034,549	37.7	55.7					
Brass and bronze products.	149,989,058	102,407,104	Connecticut.....	66,932,969	*53,916,445	44.6	*52.7	Waterbury, Conn.....	31,461,875	*19,986,964	21.0	*19.5
								Ansonia, Conn.....	16,499,613	16,297,911	11.0	15.9
								Bridgeport, Conn.....	*4,445,658	5,362,761	3.0	5.2
Butter, cheese, and condensed milk.	274,557,718	168,182,789	Wisconsin.....	53,843,249	29,994,791	19.6	17.8					
			New York.....	42,458,345	31,047,776	15.5	18.5					
			Iowa.....	25,849,866	*15,028,326	9.4	*9.0					
			Minnesota.....	25,287,462	12,871,129	9.2	7.7					

¹ Figures can not be shown without disclosing individual operations.
² Excluding statistics for two establishments, to avoid disclosure of individual operations.
³ Excluding statistics for one establishment, to avoid disclosure of individual operations.

CONCENTRATION OF INDUSTRIES.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION—Continued.

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.				
	1909	1904		Amount.		Per cent of United States total.			Amount.	Per cent of United States total.			
				1909	1904	1909	1904			1909	1904		
Canning and preserving...	\$157,101,201	\$130,465,976	California.....	\$32,914,829	\$26,083,226	21.0	20.0						
			New York.....	19,039,735	16,821,221	12.1	12.9						
			Maryland.....	13,709,449	12,935,065	8.7	9.9						
Carpets and rugs, other than rag.	71,188,152	61,586,433	New York.....	25,606,262	19,404,133	36.0	31.5	Philadelphia, Pa.....	\$22,628,537	\$25,232,519	31.8	41.0	
			Pennsylvania.....	24,879,232	27,129,311	34.9	44.0						
Clocks.....	12,235,631	8,868,000	Connecticut.....	6,809,746	6,158,034	55.7	69.4						
Clothing, men's, including shirts.	568,076,635	406,767,676	New York.....	266,075,427	187,409,206	46.8	46.1	New York, N. Y.....	218,411,030	149,483,620	38.4	36.7	
			Illinois.....	89,472,755	57,061,643	15.8	14.0	Chicago, Ill.....	85,296,407	54,625,979	15.0	13.4	
								Baltimore, Md.....	36,289,212	25,276,257	6.4	6.2	
								Philadelphia, Pa.....	29,000,899	23,642,289	5.1	5.8	
								Rochester, N. Y.....	15,578,598	14,948,709	3.3	3.7	
Clothing, women's.....	334,751,649	247,661,560	New York.....	272,517,792	173,548,355	70.8	70.1	New York, N. Y.....	266,477,381	168,418,895	69.3	68.0	
			Pennsylvania.....	32,837,424	15,085,790	8.5	6.1	Philadelphia, Pa.....	30,132,842	12,871,357	7.8	5.2	
								Chicago, Ill.....	15,676,926	11,636,818	4.1	4.7	
Coke.....	95,696,622	51,728,647	Pennsylvania.....	51,816,449	28,924,229	54.1	55.9						
			Alabama.....	8,842,512	6,175,126	9.2	11.9						
			West Virginia.....	7,563,419	4,174,196	7.9	8.1						
Collars and cuffs.....	17,230,452	12,587,277	New York.....	15,897,376	12,188,181	92.3	96.8	Troy, N. Y.....	13,638,745	11,271,708	79.2	89.5	
Corsets.....	33,257,187	14,862,081	Connecticut.....	12,814,736	5,590,637	38.5	37.6	Bridgeport, Conn.....	6,998,875	2,954,418	20.7	19.9	
Cotton goods, including cotton small wares.	628,391,813	450,467,704	Massachusetts.....	186,462,313	130,068,982	29.7	28.9	Fall River, Mass.....	48,576,114	32,538,667	7.7	7.2	
			North Carolina.....	72,680,385	47,254,054	11.6	10.5	New Bedford, Mass.....	42,505,907	22,411,996	6.8	5.9	
			South Carolina.....	65,929,585	49,437,644	10.5	11.0	Lowell, Mass.....	24,744,240	19,343,878	3.9	4.3	
			Rhode Island.....	50,312,597	34,573,450	8.0	7.7	Philadelphia, Pa.....	22,537,998	17,462,724	3.6	3.9	
			Georgia.....	48,036,817	135,174,248	7.6	17.8	Pawtucket, R. I.....	14,337,574	10,099,361	2.3	2.2	
								Cumberland, R. I.....	8,166,458	5,266,632	1.3	1.2	
								Warwick, R. I.....	7,621,518	5,370,318	1.2	1.2	
Cutlery and edge tools (not including tools not elsewhere specified).	22,884,914	18,614,929	Connecticut.....	6,720,700	6,167,852	29.4	33.1						
			Massachusetts.....	4,391,424	2,584,927	19.2	13.9						
Dyeing and finishing textiles.	83,556,432	50,849,545	Massachusetts.....	21,892,890	11,048,512	26.2	21.7	Philadelphia, Pa.....	6,327,261	4,371,006	7.6	8.6	
			New Jersey.....	15,795,788	11,979,947	18.9	23.6	Paterson, N. J.....	6,206,830	5,699,295	7.4	11.2	
			Rhode Island.....	13,955,700	9,981,457	16.7	19.6	Fall River, Mass.....	4,742,271	3,134,604	5.7	6.2	
			Pennsylvania.....	12,059,297	6,786,263	14.4	13.3	Lawrence, Mass.....	3,972,149	1,428,174	4.8	2.8	
								Providence, R. I.....	2,521,315	2,254,674	3.0	4.4	
								Pawtucket, R. I.....	2,450,858	1,644,548	2.9	3.2	
								Passaic, N. J.....	2,156,837	1,621,131	2.6	3.2	
								Warwick, R. I.....	1,681,187	1,262,329	2.0	2.5	
Firearms and ammunition.	34,111,564	28,206,381	Connecticut.....	19,948,235	17,761,675	58.5	63.0						
			Massachusetts.....	3,407,838	4,011,316	10.0	16.2						
Fur goods.....	55,937,549	37,123,129	New York.....	41,301,451	26,244,346	73.5	70.7	New York, N. Y.....	39,874,386	25,278,617	71.3	68.1	
Furnishing goods, men's (not including collars and cuffs and suspenders, garters, and elastic woven goods).	42,129,938	36,444,305	New York.....	19,763,785	17,148,982	46.9	47.1	New York, N. Y.....	18,819,024	16,336,132	44.7	44.8	
Glass.....	92,095,203	79,607,998	Pennsylvania.....	32,817,936	27,671,693	35.6	34.8						
			Ohio.....	14,358,274	9,026,298	15.6	11.3						
			Indiana.....	11,593,094	14,706,929	12.6	18.5						
Gloves and mittens, leather.	23,630,598	17,740,385	New York.....	14,336,365	9,946,443	60.7	56.1	Gloversville, N. Y.....	8,869,766	5,202,196	27.5	29.9	
								Johnstown, N. Y.....	3,256,362	2,581,274	13.9	14.6	
Grindstones.....	1,688,171	788,049	Ohio.....	1,498,256	517,069	88.8	65.6						
Hair work.....	11,216,175	1,782,491	New York.....	7,861,306	1,012,150	70.1	56.8	New York, N. Y.....	7,817,490	967,750	69.7	56.0	
Hats, fur-felt.....	47,864,630	36,629,353	Pennsylvania.....	13,022,617	7,350,811	27.2	20.1	Philadelphia, Pa.....	10,401,794	5,847,771	21.7	15.9	
			Connecticut.....	10,399,860	8,662,799	21.7	23.6	Danbury, Conn.....	7,114,683	5,798,197	14.9	15.8	
			New York.....	10,218,660	7,739,774	21.4	21.1	New York, N. Y.....	4,765,026	3,869,435	10.0	10.6	
			New Jersey.....	8,825,217	9,540,433	18.4	26.0	Newark, N. J.....	4,433,132	4,588,049	9.2	12.5	
								Orange, N. J.....	1,904,600	2,311,614	4.6	6.3	
Hosiery and knit goods (not including hand-knit goods).	198,571,588	136,558,139	New York.....	65,852,133	46,108,600	33.2	33.8	Philadelphia, Pa.....	23,901,699	15,770,873	12.0	11.5	
			Pennsylvania.....	49,583,463	39,753,140	25.0	22.5	New York, N. Y.....	12,386,254	6,030,721	6.2	4.4	
								Amsterdam, N. Y.....	8,158,701	4,677,022	4.1	3.4	
								Utica, N. Y.....	8,093,844	5,251,166	4.1	3.9	
								Coboes, N. Y.....	5,087,315	4,126,873	2.6	3.0	
								Little Falls, N. Y.....	4,654,552	2,547,676	2.3	1.9	
								Reading, Pa.....	4,551,687	2,540,166	2.3	1.9	
Ink, printing.....	8,865,504	5,774,254	New York.....	4,058,557	2,320,135	45.8	40.2	New York, N. Y.....	3,965,174	2,256,106	44.7	39.1	
Iron and steel, blast furnaces	391,429,283	231,822,707	Pennsylvania.....	168,573,413	107,455,287	43.1	46.4	Pittsburgh, Pa.....	20,698,022	15,499,861	5.3	16.7	
			Ohio.....	83,699,238	40,862,451	21.4	17.6						
			Illinois.....	38,299,897	27,330,836	9.8	11.8						
			New York.....	26,620,948	8,634,737	6.8	3.7						
Iron and steel, steel works and rolling mills.	985,722,534	673,965,026	Pennsylvania.....	500,343,995	363,773,577	50.8	54.0	Pittsburgh, Pa.....	82,306,627	77,439,999	8.3	11.5	
			Ohio.....	197,780,043	111,996,673	20.1	16.6	Youngstown, Ohio.....	50,175,133	29,738,361	5.1	4.4	
			Illinois.....	86,608,137	60,021,925	8.8	8.9	Chicago, Ill.....	45,993,782	24,939,623	4.7	3.7	
			New York.....	39,532,414	21,227,399	4.0	3.1	Cleveland, Ohio.....	34,463,316	32,279,437	3.9	4.8	

1 Excluding statistics for one establishment, to avoid disclosure of individual operations.
 2 Excluding statistics for two establishments, to avoid disclosure of individual operations.

MANUFACTURES.

SELECTED INDUSTRIES SHOWING A MARKED DEGREE OF LOCAL CONCENTRATION—Continued.

INDUSTRY.	VALUE OF PRODUCTS FOR THE UNITED STATES.		STATE.	VALUE OF PRODUCTS FOR THE STATE NAMED.				CITY.	VALUE OF PRODUCTS FOR THE CITY NAMED.			
	1909	1904		Amount.		Per cent of United States total.			Amount.	Per cent of United States total.		
				1909	1904	1909	1904			1909	1904	
Jewelry.....	\$80,349,874	\$53,225,681	Rhode Island.....	\$20,685,100	\$14,431,756	25.7	27.1	Providence, R. I.....	\$20,166,003	\$14,317,050	25.1	26.9
			New York.....	20,302,020	12,350,865	25.3	23.2	New York, N. Y.....	19,236,368	11,347,531	23.9	21.3
			Massachusetts.....	15,210,738	10,073,595	18.9	18.9	Newark, N. J.....	13,152,340	9,258,095	16.4	17.4
			New Jersey.....	13,272,004	9,303,646	16.5	17.5	Attleboro, Mass.....	7,396,558	5,544,285	9.2	10.4
Leather, tanned, curried, and finished.	327,874,187	252,620,936	Pennsylvania.....	77,926,321	69,427,852	23.8	27.5	Milwaukee, Wis.....	27,483,829	14,074,397	8.4	5.6
			Wisconsin.....	44,667,670	25,845,123	13.6	10.2	Philadelphia, Pa.....	23,526,421	23,903,239	7.2	9.5
			Massachusetts.....	40,002,079	33,352,939	12.2	13.2	Newark, N. J.....	18,838,046	13,577,719	5.8	5.4
			New Jersey.....	28,430,955	21,495,329	8.7	8.5	Chicago, Ill.....	13,243,550	9,420,426	4.0	3.7
			New York.....	27,642,383	21,642,945	8.4	8.6	Peabody, Mass.....	12,893,653	7,919,370	3.9	3.1
			Michigan.....	15,331,104	9,340,349	4.7	3.7	Wilmington, Del.....	12,079,225	10,250,842	3.7	4.1
			Illinois.....	14,911,782	10,758,196	4.5	4.3	Camden, N. J.....	5,920,238	6,364,928	1.8	2.5
			Delaware.....	12,079,225	10,250,842	3.7	4.1					
Liquors, vinous.....	13,120,846	11,097,853	California.....	8,936,848	6,688,620	68.1	60.3					
Millinery and lace goods....	85,893,632	50,777,768	New York.....	52,106,200	32,844,273	60.7	64.7	New York, N. Y.....	51,238,787	32,342,603	59.7	63.7
Needles, pins, and hooks and eyes.	6,694,095	4,750,589	Connecticut.....	4,236,036	3,062,193	63.3	64.5					
Oil, cottonseed, and cake..	147,867,894	96,407,621	Texas.....	29,915,772	18,698,815	20.2	19.4					
			Georgia.....	23,640,779	13,539,899	16.0	14.0					
			Mississippi.....	15,965,543	12,587,147	10.8	13.1					
			Louisiana.....	13,084,586	13,187,608	8.8	13.7					
			South Carolina.....	10,902,935	5,462,818	7.4	5.7					
			Alabama.....	9,178,016	5,769,061	6.2	6.0					
			North Carolina.....	8,504,477	3,748,789	5.5	3.9					
			Arkansas.....	7,788,885	4,939,919	5.3	5.1					
Paper and wood pulp.....	267,656,964	188,715,189	New York.....	48,859,610	37,750,605	18.3	20.0					
			Massachusetts.....	40,096,713	32,012,247	15.0	17.0					
			Maine.....	33,950,230	22,951,124	12.7	12.2					
			Wisconsin.....	25,962,099	17,844,174	9.7	9.5					
			Pennsylvania.....	19,872,717	15,411,032	7.4	8.2					
			Ohio.....	16,965,260	10,961,527	6.3	5.8					
			New Hampshire.....	13,994,251	8,930,291	5.2	4.7					
			Michigan.....	13,922,124	7,340,631	5.2	3.9					
Peanuts, grading, roasting, cleaning, and shelling.	9,736,551	7,260,810	Virginia.....	7,933,440	7,055,036	81.5	97.2	Petersburg, Va.....	1,721,576	922,308	17.7	12.7
			Norfolk, Va.....					991,439	791,760	10.2	10.9	
Pens, fountain, stylographic, and gold.	4,738,693	2,774,034	New York.....	3,218,760	1,945,282	67.9	70.1	New York, N. Y.....	3,218,760	1,945,282	67.9	70.1
Pipes, tobacco.....	5,311,900	2,834,496	New York.....	3,212,262	1,880,874	60.5	66.4	New York, N. Y.....	3,136,671	1,794,676	59.0	63.3
Plated ware (not including silversmithing and silverware).	18,526,193	12,138,886	Connecticut.....	14,333,213	8,125,831	77.4	66.9	Meriden, Conn.....	6,661,427	4,869,303	36.0	40.1
			New York.....	2,414,334	2,516,744	13.0	20.7	Wallington, Conn.....	2,946,163	486,257	15.9	4.0
Pottery, terra-cotta, and fire-clay products.	76,118,861	64,200,792	Ohio.....	21,173,272	18,550,840	27.8	25.9	Trenton, N. J.....	6,995,793	5,882,701	9.2	9.2
			New Jersey.....	13,139,000	11,717,103	17.3	18.3	East Liverpool, Ohio..	5,452,199	5,373,852	7.2	8.4
			Pennsylvania.....	13,072,106	10,759,272	17.2	16.8					
Rice, cleaning and polishing.	22,371,457	16,296,916	Louisiana.....	12,528,656	10,718,311	56.0	65.8	New Orleans, La.....	5,124,836	4,881,954	22.9	30.0
			Texas.....	8,142,438	4,640,269	36.4	28.5	Beaumont, Tex.....	1,627,868	1,203,123	7.3	7.4
Salt.....	11,327,834	9,437,662	Michigan.....	3,652,996	2,404,717	32.2	25.5					
			New York.....	2,896,826	3,167,279	25.6	33.6					
			Ohio.....	1,807,347	1,167,546	16.0	12.4					
			Kansas.....	1,105,920	1,123,114	9.8	11.9					
Silk and silk goods, including throwsters.	196,911,667	133,288,072	New Jersey.....	65,429,550	42,862,907	33.2	32.2	Paterson, N. J.....	40,358,271	25,433,245	20.5	19.1
			Pennsylvania.....	62,061,302	39,333,520	31.5	29.5	New York, N. Y.....	16,949,664	14,035,970	8.6	10.5
			New York.....	26,518,821	20,181,212	13.5	15.1	Allentown, Pa.....	7,455,528	3,901,249	3.8	2.9
			Connecticut.....	21,062,687	15,623,693	10.7	11.7	Scranton, Pa.....	6,630,848	4,426,635	3.4	3.3
								Philadelphia, Pa.....	6,502,044	5,079,193	3.3	3.8
Slaughtering and meat packing.	1,370,568,101	922,037,528	Illinois.....	389,594,906	318,201,253	28.4	34.5	Chicago, Ill.....	325,061,657	270,548,962	23.7	29.3
			Kansas.....	165,360,516	96,375,639	12.1	10.5	Kansas City, Kans.....	148,459,212	89,975,508	10.8	9.8
			New York.....	127,130,051	75,549,917	9.3	8.2	New York, N. Y.....	95,862,422	55,937,982	7.0	6.1
			Nebraska.....	92,305,484	69,328,920	6.7	7.5	South Omaha, Nebr..	89,445,383	65,530,935	6.5	7.1
			Missouri.....	79,581,294	60,110,427	5.8	6.5	Indianapolis, Ind.....	39,133,737	24,487,416	2.9	2.7
					St. Louis, Mo.....	26,600,956	17,485,393	1.9	1.9			
					Buffalo, N. Y.....	25,416,054	16,219,823	1.9	1.8			
Smelting and refining, copper.	378,805,974	240,780,216	New Jersey.....	125,651,067	62,795,613	33.2	26.1					
			Arizona.....	41,059,240	22,761,981	10.8	9.5					
Smelting and refining, zinc.	34,205,894	24,791,299	Kansas.....	10,857,250	10,999,468	31.7	44.4					
			Illinois.....	9,003,624	5,425,636	26.3	21.9					
Turpentine and rosin.....	25,295,017	23,937,024	Florida.....	11,937,518	9,901,905	47.2	41.4					
			Georgia.....	6,938,957	7,705,643	27.4	32.2					
			Alabama.....	2,471,999	2,434,365	9.8	10.2					
			Mississippi.....	1,474,629	2,365,720	5.8	9.9					
			Louisiana.....	1,173,848	211,820	4.6	0.9					
			North Carolina.....	673,954	743,421	2.7	3.1					
			South Carolina.....	406,286	574,150	1.6	2.4					
Wood distillation, not including turpentine and rosin.	9,736,998	7,813,483	New York.....	3,401,722	3,357,057	34.9	43.0					
			Pennsylvania.....	2,960,162	3,092,657	30.4	39.6					
			Michigan.....	2,398,927	738,254	24.6	9.4					

1 Excluding statistics for two establishments, to avoid disclosure of individual operations.
 * Excluding statistics for one establishment, to avoid disclosure of individual operations.

The following table, derived from Table 1, brings out the most conspicuous instances of local concentration. In each industry named in this table a single state in 1909 contributed more than two-fifths of the total value of products:

INDUSTRY.	State.	Per cent of total value of products for United States: 1909
Collars and cuffs.....	New York.....	92.3
Grindstones.....	Ohio.....	88.8
Artificial flowers and feathers and plumes.....	New York.....	88.2
Peanuts, grading, roasting, cleaning, and shelling.....	Virginia.....	81.5
Plated ware (not including silversmithing and silverware).	Connecticut.....	77.4
Fur goods.....	New York.....	73.8
Clothing, women's.....	New York.....	70.8
Hair work.....	New York.....	70.1
Liquore, vinous.....	California.....	68.1
Pens, fountain, stylographic, and gold.....	New York.....	67.9
Needles, pins, and hooks and eyes.....	Connecticut.....	63.3
Gloves and mittens, leather.....	New York.....	60.7
Millinery and lace goods.....	New York.....	60.7
Pipes, tobacco.....	New York.....	60.5
Firearms and ammunition.....	Connecticut.....	58.5
Rice, cleaning and polishing.....	Louisiana.....	56.0
Clocks.....	Connecticut.....	55.7
Coke.....	Pennsylvania.....	54.1
Iron and steel, steel works and rolling mills.....	Pennsylvania.....	50.8
Turpentine and rosin.....	Florida.....	47.2
Furnishing goods, men's (not including collars and cuffs nor suspenders, garters, and elastic woven goods).	New York.....	46.9
Clothing, men's, including shirts.....	New York.....	46.8
Boots and shoes, including cut stock and findings.....	Massachusetts.....	40.1
Ink, printing.....	New York.....	45.8
Brass and bronze products.....	Connecticut.....	44.0
Iron and steel, blast furnaces.....	Pennsylvania.....	43.1

Reasons for local concentration of industries.—It would require very extended discussion to attempt to determine for each industry covered by Table 1 the reasons for the concentration in the states or cities named. Moreover, such a discussion would involve a great deal of mere speculation, as the reasons for local concentration are often exceedingly obscure. It is necessary for the most part to confine the discussion to statements of a general character.

There are certain advantages which particular states or cities have with reference to manufacturing industries in general and which tend to give them prominence in manufactures as a whole. Among these advantages may be mentioned: (1) Water power, (2) convenient transportation facilities, (3) large amounts of capital available for investment in manufactures, and (4) a large supply of labor adapted to manufacturing enterprises in general. Besides these broad factors which affect the geographic distribution of manufactures in general, there are others which tend to bring about a local concentration of particular classes of manufacturing industries. Among the principal factors of this class may be mentioned: (1) Proximity to the source of the required materials, (2) proximity to the market for the specified products, (3) a supply of labor peculiarly adapted to the industry, (4) the momentum of an early start, which is usually closely related to the labor supply, and (5) the habit of industrial imitation. Moreover, some of the general

factors above mentioned act more powerfully in the case of certain industries than in the case of others. For example, water power is obviously more important in the case of those industries which require large quantities of power than in the case of those which require little power, and transportation facilities are more important with reference to heavy products than with reference to those of little weight in proportion to their value.

In some cases two or more factors cooperate in rendering a particular locality peculiarly favorable to the development of a given industry. Again, one or two factors may be so strong as to prevail in spite of the lack of favorable conditions in other respects; and part of the establishments in an industry may be concentrated in one locality or group of localities by reason of one set of advantages and part concentrated elsewhere by reason of a quite different set of advantages. For example, proximity to the market and the momentum of an early start may result in the concentration of an industry in a locality by no means convenient to the source of raw materials. This is conspicuously illustrated by the manufacture of cotton goods. This industry was originally developed mainly in the northeastern section of the country, particularly in New England, far from the cotton fields. In recent years, however, the influence of proximity to materials, together with other causes, has led to great development of cotton manufactures in the cotton producing states themselves, particularly in the South Atlantic states. The industry at present, therefore, is chiefly concentrated in two widely separated sections of the country.

On the whole, however, proximity to the source of materials is probably the most important single factor in determining the location of the more important industries. This factor is particularly effective in those industries where the raw materials are bulky, so as to involve heavy transportation charges, and most of all where the bulk of the raw materials is relatively much greater than that of the finished product. Proximity to the source of materials is also very influential in industries whose materials spoil or deteriorate quickly.

In the case of those industries which are dependent upon materials produced largely throughout the country, the need of proximity to materials may result in a wide distribution rather than a local concentration of the industry. For example, the production of lumber is not locally concentrated in any marked degree. The lumber mills are in general situated in or near the forests, and the latter in turn are more or less generally scattered over the country. For similar reasons the flour-mill and grist-mill industry is widely distributed. It is only where the production of the required materials is confined to more

or less limited areas that the need of proximity to materials can bring about local concentration of a manufacturing industry.

Other causes as well as the location of the materials have affected the geographic distribution of some of the industries just named. In the case of the blast furnace industry, for example, the present predominance of Pennsylvania can not be attributed to the production of large quantities of iron ore in the state. Pennsylvania doubtless got its start in this industry by virtue of the local supply of iron ore, but since the opening of the Lake Superior mines most of the ore which is used in the Pennsylvania blast furnaces has been brought from a long distance, although by very convenient methods of transportation. On the other hand, Pennsylvania's abundant deposits of coal suitable for coking give that state a peculiar advantage with respect to the next most important

material used in the industry; and that fact, together with the momentum of an early start and the accessibility of markets, has enabled the state to maintain its original lead.

In some industries in which proximity to materials is an important factor in determining the location of manufacturing establishments, and in which the local concentration in certain states is conspicuous, there is no marked concentration in any particular city. These are for the most part, however, industries which are not carried on to any great extent in large cities. In the butter, cheese, and condensed-milk industry, in canning and preserving, in the cottonseed-oil industry, and in the manufacture of paper and wood pulp, for example, a great part of the establishments are located in immediate proximity to the farms or forests, rather than in cities of any considerable magnitude.

CHAPTER VIII.

EXPENSES.

Summary of statistics: 1909, 1904, and 1899.—Table 1 shows, for all manufacturing industries combined in the United States as a whole, the total expenses reported at the censuses of 1909, 1904, and 1899, together with their distribution according to classes.

Table 1 CLASS OF EXPENSES.	AMOUNT OF EXPENSES REPORTED.			PER CENT OF TOTAL.		
	1909	1904	1899	1909	1904	1899
Total	\$18,454,089,599	\$13,138,259,842	\$9,870,426,102	100.0	100.0	100.0
Cost of materials.....	12,142,790,878	8,500,207,810	6,575,851,491	65.8	64.7	66.6
Materials other than fuel.....	11,496,873,804	8,118,635,555	6,272,567,805	62.3	61.8	63.5
Fuel and rent of power ¹	570,067,824	324,867,826	207,139,547	3.1	2.5	2.1
Freight charges reported separately.....	75,849,250	56,704,429	96,144,139	0.4	0.4	1.0
Payments for services.....	4,365,612,851	3,184,884,275	2,389,132,440	23.7	24.2	24.2
Salaries.....	938,574,967	574,439,322	380,771,321	5.1	4.4	3.9
Officers of corporations.....	220,668,065	141,722,790	(²)	1.2	1.1	(²)
Superintendents and managers.....	219,908,801	(²)	(²)	1.2	(²)	(²)
Clerks and other subordinate salaried employees.....	497,998,101	432,716,532	(²)	2.7	3.3	(²)
Wages.....	3,427,037,884	2,610,444,953	2,008,361,119	18.6	19.9	20.3
Miscellaneous expenses.....	1,945,685,870	1,453,187,757	905,442,171	10.5	11.1	9.2
Rent of factory.....	106,573,661	73,264,719	(²)	0.6	0.6	(²)
Taxes.....	351,309,449	58,613,375	(²)	1.9	0.4	(²)
Internal revenue.....	283,012,010	(²)	(²)	1.4	(²)	(²)
Other.....	88,297,439	58,613,375	(²)	0.5	0.4	(²)
Contract work.....	178,645,635	144,316,854	(²)	1.0	1.1	(²)
All other (rent of offices and buildings, other than factory or works, rent of machinery, royalties, use of patents, insurance, ordinary repairs of buildings and machinery, advertising, traveling expenses, and all other sundry expenses).....	1,309,157,125	1,176,972,809	(²)	7.1	9.0	(²)

¹ As to comparability of the figures for the different censuses, see discussion in text.

² Figures not available.

³ Included under "all other."

The total amount of expenses reported in 1909 was, in round numbers, \$18,454,000,000, of which the cost of materials represented 65.8 per cent, wages 18.6 per cent, salaries 5.1 per cent, and miscellaneous expenses 10.5 per cent.

It should be noted that the very large proportion of expenses represented by cost of materials is due partly to the fact that there is a great deal of duplication in this latter item. Many of the manufacturing establishments use strictly raw materials; that is, materials derived from nonmanufacturing industries, such as agriculture or mining. On the other hand, many manufacturing establishments use the products of other manufacturing establishments as their materials, and the cost of these partly manufactured materials covers not only the cost of the original raw materials but also the wages paid and other expenses incurred in connection with the manufacturing processes through which they have already passed, together with the manufacturer's profit. Were it possible to exclude all such duplication, the proportion of the total expenses represented by cost of materials would be very much less. It may be noted also that the comparability of the statistics as to the cost of materials for different censuses may be somewhat affected by changes in the relative amount of duplication in such cost.

As more fully explained later, the total expenses reported for 1904 and 1899 are not strictly comparable with those reported for 1909, and some of the individual items of expense are still more lacking in comparability. On the whole, however, the totals for all expenses combined are not far from comparable, and the same is true of two of the three main groups of expenditures, namely, cost of materials and wages and salaries. The total expenses reported show an increase of 87 per cent during the decade 1899-1909, as compared with an increase of 81.2 per cent in the value of products of manufacturing industries. The cost of materials increased 84.7 per cent, the salary payments 146.5 per cent, and the wage payments 70.6 per cent.

The amount paid for wages constituted a somewhat smaller proportion of the total expenses in 1909 than at either of the two preceding censuses, and the amount paid for salaries an appreciably larger proportion. On the other hand, the cost of materials formed a smaller proportion of the total in 1904 than in either 1909 or 1899, while the miscellaneous expenses formed a larger proportion in 1904 than at either of the other two censuses.

Explanation of items and significance of the statistics.—Certain explanations with regard to the significance of the statistics for expenses have already

been presented in Chapter I of this report, but on account of the importance of the subject the substance of these explanations is repeated here with additional comment regarding some of the minor classes of expenditure which were not discussed in detail in the Introduction.

Profits not shown by census returns.—As stated in Chapter I the census returns do not cover the entire cost of manufacture, and consequently can not be used for comparison with the value of products to determine the amount of profit. The chief item of expense which is omitted from the census returns is that of depreciation in the value of buildings, machinery, and other equipment. At the census of 1909 manufacturers were expressly instructed to omit any allowance for depreciation. This was done for the reason that it seemed better to exclude depreciation altogether than to secure it only in a limited number of cases and without any uniformity in the method of determining the depreciation allowance. While some manufacturing establishments make estimates of depreciation and charge it as a definite element of cost in their accounts, the great majority do not, and those who do follow the widest possible variety of methods in determining the rate of depreciation. At the censuses of 1904 and 1899 depreciation was not expressly excluded, but it was not listed among the elements of expense to be reported, and probably was seldom included in the expenses returned.

At the census of 1909 manufacturers were also expressly instructed to exclude interest paid on borrowed money from the expenditures reported. There are differences of opinion among manufacturers and accountants as to whether interest should be considered an element of cost or whether, on the other hand, borrowed money should be considered as part of the capital and interest paid thereon as part of the return on capital. Doubtless the latter method is the more correct from the broad economic standpoint. Certainly in the case of those manufacturing corporations which have issued large amounts of bonds representing a large part of the cost of their plants it would be highly improper to treat the interest on bonds as part of the current cost of production. In 1909 the schedule called for the amount of borrowed money as part of capital. In 1904 and 1899, however, interest was listed among the expenses to be included under the heading of "all other," so that the aggregate expenses reported for those years are not strictly comparable with the figures shown for 1909, and still less the total miscellaneous expenses.

Aside from the fact that the expenses as reported do not include depreciation, there is a certain degree of inaccuracy in the expenses actually reported and in the value of products reported, which renders it impossible to make any close calculation as to profits. Many of the establishments covered by the census do not keep their accounts very carefully. Again, not a

few manufacturing establishments are owned by companies or individuals who are also engaged in non-manufacturing enterprises, and who do not keep separate accounts for the manufacturing branch of the business. If in such cases the nonmanufacturing branch of the business was comparatively unimportant, data for the entire business were included in the census report on manufactures, but, on the other hand, if it was of considerable importance an estimated segregation of the items relating to manufactures was made.

Furthermore, although, as more fully explained elsewhere (see Chapter I), the Bureau of the Census sought to obtain the net value of products at the factory, it is probable that in some cases the values reported were subject to deductions for freight, selling expenses, or other items, which deductions in turn were not fully reported under "expenses." On the other hand, in some instances the cost of production rather than the selling value of the products at the factory may have been reported or the value of the products may otherwise have been understated. Nevertheless, were it not for the fact that the important item of depreciation is not included with expenses it would doubtless be possible to obtain for all industries combined and for some of the more important industries individually a rough approximation to the amount of return on capital by deducting the sum of the reported expenses from the reported value of products.

Cost of materials.—As stated above, the cost of materials includes much duplication due to the use of the manufactured products of one establishment as materials for other establishments. At the censuses of 1899 and 1904 an attempt was made to distinguish between strictly raw materials and materials partially manufactured, but it was found impossible in many cases to segregate the two classes accurately (see Chapter I).

The materials used in manufactures fall into two main classes: (1) Fuel, which for the most part does not become a constituent part of the product, but is used chiefly to generate power by means of which to subject other materials to manufacturing processes; and (2) all other materials. In some industries, the most important of which are the coke and gas industries, one kind of fuel is transformed into another, and in such cases the fuel used as material, strictly speaking, belongs to the materials of the second class just specified, but in Table 1 and in the other tables of this report the cost of all fuel for 1909 is included as one item. In 1904 and 1899, on the other hand, the cost of the fuel thus transformed was included with the cost of other materials, so that the figures for fuel shown in Table 1 are not comparable. The partial data available indicate, however, that the cost of all fuel (together with the rent of power and heat) for 1904 would amount to about \$385,000,000 and for 1899 to about \$245,000,000, as compared with \$570,067,824 for 1909.

It would be desirable, if possible, to ascertain the cost of each of these two main classes of materials as delivered at the factory. The necessarily incomplete statistics as to freight charges on materials have no value in themselves. In many instances manufacturers buy materials at prices which include delivery at their works, and have no knowledge as to the freight charges. In other cases, however, manufacturers pay the freight charges and keep a freight account, but they are often under such conditions unable to report what part of the expenditure represents charges for the transportation of fuel and what part charges for the transportation of other materials. For this reason the cost of each class of materials at the factory can not be determined. The amount of freight charges reported separately by manufacturers, as shown by Table 1, was, in 1909, \$75,849,250. It is obvious that much the greater part of these freight charges must have been paid upon materials other than fuel, since the cost of materials other than fuel was more than twenty times as great as that of fuel. In most tables of this report giving statistics of expenses, therefore, the entire amount of freight charges reported separately has been, for convenience, added to the cost of materials other than fuel. The amount of freight charges reported separately was much greater in 1899 than in 1904 or 1909, but this simply indicates that the statistics are incomparable.

The statistics given for the cost of fuel include also the amount paid by manufacturing establishments for the rent of power and heat generated by outside concerns, chiefly electric power. The use of rented power obviously, in most cases, reduces the direct expenditure for fuel.

Salaries and wages.—The items of expenditure for salaries and wages require no special comment. The lack of significance of an "average wage" computed from the aggregate wage payments has already been pointed out in Chapter I.

Miscellaneous expenses.—The group of miscellaneous expenses is divided into four subgroups—rent of factory, taxes, payments for contract work, and all other expenses. With reference to the item "rent of factory," which does not include rent of offices where this could be separated, it should be observed that, strictly speaking, the value of factory buildings and machinery owned by others and rented by manufacturers should be included with the capital investment of manufacturing industries. If this could be done the present item would of course be omitted from the expenses reported, the greater part of the amount of rental properly representing a return on capital used for manufacturing purposes. It is impossible, however, to ascertain with any degree of accuracy the value of factory plants which are rented by manufacturing concerns from others, and consequently it has been necessary to include the payments by manufacturers for rent of factories as a part of operating expenses. If it be assumed

that the amount of rent paid is equivalent to 8 per cent on the investment of the owners of the rented factories, the investment in such factories in 1909 would have amounted to approximately \$1,300,000,000, which, when added to the \$18,428,269,706 reported as the capital investment of the manufacturers themselves, would give a grand total of almost twenty billions of dollars invested in manufacturing enterprises (see Chapter I). The item "rent of factory" for 1904 is substantially comparable with that for 1909.

The item of \$351,309,449 reported as paid for taxes in 1909 includes \$263,012,010 of internal revenue taxes, mostly paid upon liquors and tobacco. In 1904 the amount paid for internal revenue taxes was not shown separately nor included with other taxes, but was included with "all other" miscellaneous expenses. In 1909 the amount of internal revenue taxes was included with expenses, even in those cases where the manufacturers themselves had not paid the taxes but where they had been paid by the purchaser of the product or where the products subject to tax were held in bond with the intent that the tax should subsequently be paid either by the manufacturer or by the purchaser. At earlier censuses, on the other hand, only the internal revenue taxes actually paid by the manufacturers were included with the expenses of manufacturing industries. This change, however, does not materially affect the comparability of the total for miscellaneous expenses or for all expenses combined.

The expenses reported for contract work comprise the payments made by one manufacturer to another manufacturer who performed any kind of work upon materials furnished by the former. It is obvious that this item, like the cost of partly manufactured materials, gives rise to a certain amount of duplication in the expenses reported, since it has already been covered in large part by the payments of the contractor for labor, fuel, etc., and in so far represents simply the repayment of these expenditures by one establishment to another. In other words, if the establishment furnishing the materials and the establishment doing the contract work could be combined, the same output of finished product might be expected without the expenditure now reported for contract work. The practice of having work done by contract is particularly conspicuous in the clothing trades. The figures for 1904 are substantially comparable with those for 1909.

Under "all other" miscellaneous expenses are included all factory expenses not specifically covered by other items. The statements already made as to depreciation charges and interest payments concern this item particularly, and it is obvious from what has been said that the amount of "all other" miscellaneous expenses for 1904 is by no means comparable with that for 1909. The fact that royalties and other charges for the use of patents were specifically called for as a part of this item at the census of 1909, but were

not named in the inquiry at prior censuses, probably resulted in a fuller report for them at the later census. This is another, though minor, factor that should be considered in comparing the totals.

It may be noted at this point that, although in 1899 the schedule distinguished the subclasses of miscellaneous expenses, the Census Bureau has not undertaken to segregate in detail statistics for factories proper from those for establishments in the building, hand, and neighborhood industries, which were not canvassed at the censuses of 1904 and 1909. For the main classes of expenses, however, this segregation has been made, and the figures shown in Table 1 represent only the expenses of establishments operated under the factory system and are therefore in that respect comparable with those for the two later census years.

Distribution of expenses in individual industries.—General Table II shows for 1909, for the 259 industries distinguished by the Bureau of the Census for which separate figures can be given, the total amount of expenses reported; the amounts paid for salaries of officials, for salaries of clerks (including all subordinate salaried employees), and for wages, respectively; the cost of fuel and rent of power, and the cost of other materials, the total amount reported separately as paid for freight on all materials being included with this item; and the amount of miscellaneous expenses, divided into four subclasses.

General Table VI presents similar statistics of expenses for 1909 for each of the 259 industries, by states. It covers each state for which statistics for the given industry can be presented without disclosing individual operations.

Table 2 shows for 1909, in percentages, the distribution of the total expenses reported among the four chief classes, for each of the 86 leading industries. The absolute numbers on which these percentages are based appear in General Table II.

In most industries the cost of materials is the most important single element of expense, and in many it exceeds all other expenses combined. Differences among industries as to the ratio between cost of materials and total expenses naturally correspond roughly, in most cases, to the differences among them with respect to the ratio between cost of materials and value of products, a subject which has been discussed in some detail in Chapter III. Where manufacturing processes work but simple transformations in the materials, the cost of materials usually forms a relatively large proportion both of total expenses and of value of products; conversely, where the products are highly elaborated, the cost of materials usually forms a relatively small proportion of the total expenses and value of products.

Table 2

INDUSTRY.	PER CENT OF TOTAL EXPENSES REPORTED: 1909.			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.
All industries.....	5.1	18.6	65.8	10.5
Agricultural implements.....	8.6	24.3	51.1	16.0
Artificial flowers and feathers and plumes.....	5.7	19.4	66.6	8.3
Automobiles, including bodies and parts.....	4.5	23.1	62.5	9.9
Boots and shoes, including cut stock and findings.....	3.9	20.6	69.6	5.9
Boots and shoes, rubber.....	3.4	20.5	71.1	5.0
Boxes, fancy and paper.....	7.7	29.1	53.3	9.9
Brass and bronze products.....	4.1	17.3	72.6	6.0
Bread and other bakery products.....	4.0	17.4	69.9	8.6
Brick and tile.....	7.2	49.0	31.3	12.5
Butter, cheese, and condensed milk.....	1.4	4.3	91.0	3.3
Buttons.....	6.8	35.4	49.7	8.2
Canning and preserving.....	5.6	13.5	72.0	9.0
Carpets and rugs, other than rag.....	3.5	24.9	63.5	8.0
Carriages and wagons and materials.....	5.7	27.0	58.9	8.4
Cars and general shop construction and repairs by steam-railroad companies.....	4.3	44.7	49.2	1.8
Cars and general shop construction and repairs by street-railroad companies.....	3.8	45.4	47.5	3.4
Cars, steam-railroad, not including operations of railroad companies.....	4.4	23.0	66.7	6.0
Cement.....	6.5	27.3	52.3	13.9
Chemicals.....	6.5	15.0	68.2	10.3
Clocks and watches, including cases and materials.....	7.3	43.3	37.2	12.1
Clothing, men's, including shirts.....	5.2	20.7	57.9	16.2
Clothing, women's.....	6.0	23.0	61.1	9.9
Coke.....	2.4	18.2	75.5	3.9
Confectionery.....	7.6	13.1	67.9	11.4
Cooperage and wooden goods, not elsewhere specified.....	3.8	21.6	68.1	6.6
Copper, tin, and sheet-iron products.....	5.8	22.4	63.7	8.1
Cordage and twine and jute and linen goods.....	3.3	16.3	73.0	7.4
Corsets.....	10.0	22.5	54.5	13.0
Cotton goods, including cotton small wares.....	2.6	24.0	66.9	6.5
Cutlery and tools, not elsewhere specified.....	9.2	38.6	40.1	12.1
Dyeing and finishing textiles.....	7.3	30.9	51.4	10.4
Electrical machinery, apparatus, and supplies.....	10.0	24.5	53.8	11.7
Fancy articles, not elsewhere specified.....	8.9	26.1	53.1	11.9
Fertilizers.....	4.9	8.3	77.2	9.7
Firearms and ammunition.....	6.4	28.0	56.6	9.1
Flour-mill and gristmill products.....	1.5	2.6	92.8	3.1
Food preparations.....	5.2	6.3	74.8	13.7
Foundry and machine-shop products.....	8.7	29.8	50.1	11.4
Fur goods.....	5.4	16.6	67.8	10.1
Furnishing goods, men's.....	6.7	19.5	63.4	10.3
Furniture and refrigerators.....	7.3	30.8	51.0	10.9
Gas and electric fixtures and lamps and reflectors.....	10.9	26.0	51.2	11.9
Gas, illuminating and heating.....	10.9	18.4	46.2	24.5
Glass.....	5.8	46.0	37.6	10.5
Gloves and mittens, leather.....	5.9	22.4	62.2	9.5
Hats, fur-felt.....	5.0	34.0	52.8	8.2
Hosiery and knit goods.....	4.4	25.5	62.7	7.4
Ice, manufactured.....	12.2	30.9	35.8	21.0
Iron and steel, blast furnaces.....	1.8	6.8	88.4	3.0
Iron and steel, steel works and rolling mills.....	2.9	18.3	73.9	4.8
Iron and steel, bolts, nuts, washers, and rivets, not made in steel works or rolling mills.....	6.2	26.2	57.9	9.6
Jewelry.....	8.6	27.1	54.1	10.2
Leather goods.....	7.2	19.3	64.6	8.9
Leather, tanned, curried, and finished.....	2.2	10.5	81.2	6.1
Lime.....	7.2	40.1	45.2	7.5
Liquors, malt.....	7.6	13.7	32.2	46.5
Locomotives, not made by railroad companies.....	8.1	31.4	53.1	7.5
Lumber and timber products.....	4.8	32.0	51.0	12.2
Marble and stone work.....	6.7	44.8	39.4	9.1
Mattresses and spring beds.....	6.4	18.2	64.7	10.6
Millinery and lace goods.....	7.3	22.0	60.9	9.8
Mineral and soda waters.....	8.6	20.9	49.8	20.6
Musical instruments, pianos and organs and materials.....	6.9	28.2	54.2	10.7
Oil, cottonseed, and cake.....	3.1	4.3	87.7	4.9
Paint and varnish.....	9.3	7.4	71.1	12.2
Paper and wood pulp.....	4.0	17.2	69.7	9.1
Paper goods, not elsewhere specified.....	7.5	16.6	63.4	12.5
Patent medicines and compounds and druggists' preparations.....	14.9	8.7	44.1	32.4
Petroleum, refining.....	1.8	4.4	89.6	4.2
Pottery, terra-cotta, and fire-clay products.....	8.9	45.3	33.4	12.5
Printing and publishing.....	16.7	26.6	32.6	24.1
Rubber goods, not elsewhere specified.....	4.7	12.4	72.0	10.9
Sewing machines, cases, and attachments.....	5.3	41.7	43.0	9.9
Shipbuilding, including boat building.....	6.0	37.4	46.2	10.4
Silk and silk goods, including throwsters.....	4.2	21.8	60.8	13.2
Silverware and plated ware.....	7.6	28.4	50.6	13.4
Slaughtering and meat packing.....	1.5	3.9	91.3	3.3
Smelting and refining, copper.....	0.7	3.8	94.4	1.1
Soap.....	5.6	6.3	73.5	14.6
Stoves and furnaces, including gas and oil stoves.....	10.0	33.1	42.3	14.6
Tobacco manufactures.....	4.6	19.0	48.4	28.0
Turpentine and rosin.....	8.7	49.2	25.8	16.3
Wire.....	2.8	13.3	78.2	5.7
Wirework, including wire rope and cable.....	7.2	17.1	65.9	9.8
Wood, turned and carved.....	5.7	33.7	52.9	7.7
Woolen, worsted, and felt goods, and wool hats.....	2.6	18.7	72.9	5.8

In comparing the industries in Table 2 it should be borne in mind that in some industries there is considerable duplication in the cost of materials, due to the use of the products of one establishment as materials for others in the same industry. This is the case, for example, in the automobile, boot and shoe, cotton goods, and fertilizer industries, the steel works and rolling mills, the manufacture of paper and wood pulp, the smelting and refining of copper, and the manufacture of woolen, worsted, and felt goods, and wool hats. In many industries, however, there is practically no such duplication in cost of materials within the industry.

As would be expected, the proportions represented by the several classes of expenses vary greatly in the different industries. For example, salaries constituted a relatively large proportion of the total in the printing and publishing industry (16.7 per cent), the manufacture of patent medicines and compounds and druggists' preparations (14.9 per cent), the artificial ice industry (12.2 per cent), the gas industry (10.9 per cent), and the manufacture of gas and electric fixtures and lamps and reflectors (10.9 per cent). The majority of these industries require a large force of employees for accounting and collecting, and in the case of printing and publishing for other work scarcely to be considered manufacturing. The industries for which the highest percentages for wages are shown—in each case over 45 per cent—are the turpentine and rosin, brick and tile, and glass industries, the street-railroad repair shops ("cars and general shop construction and repairs by street-railroad companies"),

and the manufacture of pottery, terra-cotta, and fire-clay products. The cost of materials constituted over 90 per cent of the expenses reported in the smelting and refining of copper and in the flour-mill and grist-mill, slaughtering and meat-packing, and butter, cheese, and condensed milk industries.

Of the industries included in the table, the brewery industry ("liquors, malt") shows the highest proportion for miscellaneous expenses (46.5 per cent), followed by the manufacture of patent medicines and compounds and druggists' preparations, in which the proportion was 32.4 per cent, and the tobacco industry, in which it was 28 per cent. Expenditures for advertising, and in the case of liquors and tobacco, internal revenue taxes, swell the totals for miscellaneous expenses in these industries. Miscellaneous expenses are also relatively large—exceeding 20 per cent of the total—in the gas, printing and publishing, artificial ice, and mineral and soda water industries. It should be noted, however, that because of the heavy internal revenue taxes, miscellaneous expenses formed a much larger proportion of the total (79 per cent) in the distillery industry ("liquors, distilled"), which is not among the 86 leading industries, than in any of the industries shown in the table.

Distribution of expenses in individual states.—General Table IV shows, for each geographic division and state, for all industries combined, the amount reported as paid in 1909 for the different classes of expenses.

The following table shows, for each geographic division and state, the per cent distribution of the total expenses reported in 1909 among the principal classes:

DIVISION AND STATE.	PER CENT OF TOTAL EXPENSES REPORTED: 1909				DIVISION AND STATE.	PER CENT OF TOTAL EXPENSES REPORTED: 1909			
	Salaries.	Wages.	Materials.	Miscellaneous expenses.		Salaries.	Wages.	Materials.	Miscellaneous expenses.
United States	5.1	18.6	65.8	10.5	SOUTH ATLANTIC:				
GEOGRAPHIC DIVISIONS:					Delaware.....	4.9	21.9	65.9	7.2
New England.....	4.8	23.7	62.6	8.9	Maryland.....	4.8	15.9	69.6	9.7
Middle Atlantic.....	5.4	18.6	65.3	10.8	District of Columbia.....	9.0	24.4	50.0	16.6
East North Central.....	5.4	17.8	65.1	11.7	Virginia.....	4.6	19.4	64.0	11.9
West North Central.....	4.2	12.4	75.1	8.3	West Virginia.....	3.9	22.8	64.2	9.0
South Atlantic.....	4.7	20.1	64.9	10.3	North Carolina.....	3.7	18.4	65.4	12.5
East South Central.....	5.2	18.3	60.2	16.2	South Carolina.....	3.9	20.9	68.1	7.1
West South Central.....	4.5	17.4	68.1	9.9	Georgia.....	5.1	19.8	66.4	8.7
Mountain.....	3.9	17.8	71.6	6.7	Florida.....	7.8	36.4	41.3	14.5
Pacific.....	4.9	20.4	65.4	9.3	EAST SOUTH CENTRAL:				
NEW ENGLAND:					Kentucky.....	4.8	13.9	55.6	25.8
Maine.....	3.7	24.3	62.7	9.2	Tennessee.....	5.8	17.8	65.4	11.0
New Hampshire.....	2.8	24.3	65.8	7.1	Alabama.....	5.1	21.1	64.6	9.2
Vermont.....	4.7	28.9	58.2	8.3	Mississippi.....	5.3	27.3	53.7	13.6
Massachusetts.....	4.8	22.8	62.9	9.5	WEST SOUTH CENTRAL:				
Rhode Island.....	4.4	22.8	65.3	7.5	Arkansas.....	5.3	29.5	53.9	11.3
Connecticut.....	6.0	25.6	59.8	8.6	Louisiana.....	4.4	16.4	66.1	13.1
MIDDLE ATLANTIC:					Oklahoma.....	4.3	15.3	72.3	8.0
New York.....	6.2	18.7	62.2	12.9	Texas.....	4.4	15.5	72.8	7.3
New Jersey.....	4.7	16.4	69.7	9.2	MOUNTAIN:				
Pennsylvania.....	4.7	19.3	67.2	8.8	Montana.....	3.1	16.3	73.6	7.0
EAST NORTH CENTRAL:					Idaho.....	5.2	29.1	52.5	13.2
Ohio.....	5.6	19.1	64.2	11.0	Wyoming.....	5.6	37.2	46.6	10.6
Indiana.....	5.0	18.2	63.7	13.1	Colorado.....	4.9	17.4	70.2	7.5
Illinois.....	5.3	15.8	67.0	12.0	New Mexico.....	5.4	36.8	46.3	11.5
Michigan.....	5.9	20.1	62.3	11.6	Arizona.....	1.9	13.4	81.7	3.0
Wisconsin.....	4.9	17.9	65.9	11.4	Utah.....	3.6	15.5	76.1	4.8
WEST NORTH CENTRAL:					Nevada.....	3.4	17.9	75.5	3.2
Minnesota.....	4.1	12.6	74.9	8.4	PACIFIC:				
Iowa.....	4.7	13.9	73.2	8.2	Washington.....	5.0	25.4	60.1	9.6
Missouri.....	5.6	15.5	67.9	11.1	Oregon.....	4.9	24.2	61.6	9.3
North Dakota.....	3.6	10.3	79.1	6.9	California.....	4.8	17.7	68.3	9.2
South Dakota.....	3.9	14.6	72.7	8.9					
Nebraska.....	3.0	7.6	82.3	7.1					
Kansas.....	2.4	8.5	84.7	4.4					

The percentage of the total expenses which is represented by each class in the several divisions and states depends chiefly on the character of the predominating industries. Thus among the geographic divisions the West North Central showed in 1909 the highest percentage of expenses for materials and the lowest for wages, this condition being due to the predominating importance in this division of the flour-mill and gristmill and slaughtering and meat-packing industries, in which materials contribute the greater part of the value of products. The proportion of expenses incurred for materials was also high in the Mountain division, where the smelting and refining industries are important.

Wages represented the highest percentage of the total expenses (23.7) in the New England division, where the textile and other highly elaborative industries predominate. Differences among the divisions as to the relative amount of duplication in cost of

materials also affect the distribution of the reported expenses.

Among the individual states the highest percentage for materials is shown for Kansas and the next highest for Nebraska, while the percentage was lowest in Florida; the highest percentages for wages are shown for Wyoming, New Mexico, and Florida, in the order named. Among the great manufacturing states of the East and North there was no great variation in the distribution of expenses among the four classes. Of the 10 most important manufacturing states, Massachusetts had the highest proportion for wages and one of the lowest for miscellaneous expenses.

The exceptionally high percentage for miscellaneous expenses in Kentucky (25.8) was due to the importance there of the distillery industry, in the miscellaneous expenses of which are included very large sums paid as internal revenue tax.